

Hypertext marks in L^AT_EX

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<https://github.com/ho-tex/hyperref/issues>

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1 Documentation overview for hyperref

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

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

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


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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

 **hyperref.dtx** This is the source code documentation for hyperref (this file).

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in L^AT_EX”

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3 File hycheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a 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 LuaTeX compatibility

Until a LuaTeX driver is written, load `luatex85` so that the `pdfTeX` driver continues to work with LuaTeX.

```
165 %\ifx\directlua\@undefined\else
166 % \RequirePackage{luatex85}
167 %\fi
```

4.2 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`.

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

`\Hy@SetCatcodes`

```
184 \def\Hy@SetCatcodes{%
185   \@makeother\‘%
186   \@makeother\=%
187   \catcode\‘$=3 %
188   \catcode\&=4 %
189   \catcode\^=7 %
190   \catcode\_ =8 %
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   \@makeother\- %
205   \@makeother\" %
```

```

206 \@makeother\'%
207 }

```

\Hy@RestoreCatcodes

```

208 \begingroup
209 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
210 \xdef\Hy@RestoreCatcodes{%
211   \the\toks@
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   \x\-%
230   \x\'%
231   \x\'%
232 }%
233 \endgroup

234 \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.

```

235 \IfFileExists{hobsub-hyperref.sty}{%
236   \RequirePackage{hobsub-hyperref}[2011/01/30]%
237 }{}

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

```

```

255 \fi
256 }%
257 }

258 \RequirePackage{infwarerr}[2010/04/08]
259 \RequirePackage{keyval}[1997/11/10]
260 \RequirePackage{kvsetkeys}[2007/09/29]
261 \RequirePackage{kvdefinekeys}[2011/04/07]
262 \RequirePackage{pdfescape}[2007/11/11]
263 \RequirePackage{ifvtex}
264 \RequirePackage{ifxetex}[2006/08/21]
265 \RequirePackage{hycolor}
266 \RequirePackage{letltxmacro}[2008/06/13]
267 \RequirePackage{auxhook}[2009/12/14]
268 \def\Hy@Error{\@PackageError{hyperref}}
269 \def\Hy@Warning{\@PackageWarning{hyperref}}
270 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
271 \def\Hy@Info{\@PackageInfo{hyperref}}
272 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
273 \def\Hy@Message#1{%
274   \GenericWarning{%
275     (hyperref)\@spaces\@spaces\@spaces\@spaces
276   }{%
277     Package hyperref Message: #1\ltx@gobble
278   }%
279 }

```

4.3 Version check

\Hy@VersionChecked

```

280 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

281 \def\Hy@VersionCheck#1{%
282   \begingroup
283   \ltx@ifundefined{ver@hyperref.sty}{%
284     \Hy@Error{%
285       This should not happen!\MessageBreak
286       Missing hyperref version%
287     }\@ehd
288   }{%
289     \ltx@ifundefined{ver@#1}{%
290       \Hy@Error{%
291         This should not happen!\MessageBreak
292         Missing version of '#1'%
293       }\@ehd
294     }{%
295       \def\x##1##2##3{%
296         \expandafter\expandafter\expandafter\Hy@@VersionCheck
297         \expandafter\expandafter\expandafter##2%
298         \csname ver@##3\endcsname##1##1\@nil
299       }%
300       \x{ }\y{hyperref.sty}%
301       \x{ }\z{#1}%
302       \ifx\y\z
303       \else
304       \edef\a{#1}%

```

```

305 \edef\b{\HyOpt@CustomDriver.def}%
306 \ifx\a\b
307 \Hy@WarningNoLine{%
308   Version mismatch (custom driver)!\MessageBreak
309   * \y: hyperref.sty\MessageBreak
310   * \z: \a
311 }%
312 \else
313 \Hy@Error{%
314   Version mismatch!\MessageBreak
315   * \y: hyperref.sty\MessageBreak
316   * \z: \a
317 }\@ehd
318 \fi
319 \fi
320 }%
321 }%
322 \endgroup
323 \chardef\Hy@VersionChecked=1 %
324 }

```

\Hy@@VersionCheck

```

325 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
326 \def#1{#2 #3}%
327 }

```

4.4 Checks with regular expressions

```

328 \ltx@ifundefined{pdfmatch}{%
329 \def\Hy@Match#1#2#3#4#5{%
330 }{%
331 \def\Hy@Match#1#2#3{%
332 \begingroup
333 \edef\~{\ltx@backslashchar\string~}%
334 \edef\.\{\ltx@backslashchar.}%
335 \edef\[\{\ltx@backslashchar[% ]%
336 \edef\${\ltx@backslashchar$}%
337 \edef\(\{\ltx@backslashchar(%
338 \edef\)\{\ltx@backslashchar)%
339 \edef\|\{\ltx@backslashchar|}%
340 \edef\*\{\ltx@backslashchar*}%
341 \edef\+\{\ltx@backslashchar+}%
342 \edef\?\{\ltx@backslashchar?}%
343 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
344 \edef\}\{\ltx@rightbracechar}%
345 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
346 \let\ \ltx@space
347 \ifcase\pdfmatch#2{#3}{#1} %
348 \endgroup
349 \expandafter\ltx@secondoftwo
350 \or
351 \endgroup
352 \expandafter\ltx@firstoftwo
353 \else
354 \Hy@Warning{%
355   Internal error: Wrong pattern!\MessageBreak
356   --> #3 <--\MessageBreak

```

```

357     Pattern check ignored%
358   }%
359   \endgroup
360   \expandafter\ltx@firstoftwo
361   \fi
362 }%
363 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%}{%
364   \begingroup
365     \lccode'0='\relax
366     \lowercase{\endgroup
367       \def\ltx@leftbracechar{0}%
368     }%
369     \begingroup
370       \lccode'0='\relax
371       \lowercase{\endgroup
372         \def\ltx@rightbracechar{0}%
373       }%
374     }%
375 }

```

4.5 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`.

```

376 \@ifundefined{AfterBeginDocument}{%
377   \def\AfterBeginDocument{\AtBeginDocument}%
378 }{}%

```

`\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.

```

379 \def\Hy@AtBeginDocument{%
380   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
381 }

```

`\Hy@AtEndOfPackage`

```

382 \def\Hy@AtEndOfPackage{%
383   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
384 }

```

`\Hy@AtBeginDocumentHook`

```

385 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

386 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

387 \AtEndOfPackage{%
388   \Hy@AtEndOfPackageHook
389   \let\Hy@AtEndOfPackageHook\@undefined
390   \AfterBeginDocument{%

```

```

391 \Hy@AtBeginDocumentHook{}%
392 \let\Hy@AtBeginDocumentHook\@undefined
393 }%
394 }

```

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

```

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

```

4.6 Switches

```

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

```

```

442 \let\Hy@debugtrue\Hy@verbosetrue
443 \let\Hy@debugfalse\Hy@verbosefalse
444 \newif\ifHy@pdfwindowui
445 \newif\ifHy@pdfdisplaydoctitle
446 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

488 \newdimen\@linkdim
489 \let\Hy@driver\ltx@empty
490 \let\MaybeStopEarly\relax

```

```

491 \newcount\Hy@linkcounter
492 \newcount\Hy@pagecounter
493 \Hy@linkcounter0
494 \Hy@pagecounter0

```

5.1 Macros for recursions

```

495 \let\Hy@ReturnEnd\@empty
496 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
497 \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.

```

498 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
499 \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).

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalsbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalsbpdef`. Limitations:
 - Works only in options that use `\hypercalsbpdef` (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 \hypercalsbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}

```

`\hypercalsbp`

```

500 \begingroup\expandafter\expandafter\expandafter\endgroup
501 \expandafter\ifx\csname dimexpr\endcsname\relax
502 \def\hypercalsbpdef#1#2{%
503   \begingroup
504   \toks@{\}%
505   \HyCal@scan#2\hypercalsbp\@nil
506   \expandafter\endgroup

```

```

507 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
508 }%
509 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
510 \toks@\expandafter{\the\toks@ #1}%
511 \ifx\#2\%
512 \else
513 \ltx@ReturnAfterFi{%
514 \HyCal@do#2\@nil
515 }%
516 \fi
517 }%
518 \def\HyCal@do#1#2\@nil{%
519 \@ifpackageloaded{calc}{%
520 \Hy@Warning{%
521 For calculations \string\hypercalcbp\space needs\MessageBreak
522 package calc or e-TeX%
523 }%
524 }%
525 \setlength{\dimen@}{#1}%
526 \setlength{\dimen@}{0.99626401\dimen@}%
527 \edef\x{%
528 \toks@{%
529 \the\toks@
530 \strip@pt\dimen@
531 }%
532 }\x
533 \HyCal@scan#2\@nil
534 }%
535 \else
536 \def\hypercalcbp#1{%
537 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
538 }%
539 \def\hypercalcbpdef{\def}%
540 \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 cat-codes 10 until 12.

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

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

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

```
542 \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.

```
543 \escapechar'\%
```

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

```
544 \edef\0{\string\0}%
545 \edef\1{\string\1}%
546 \edef\2{\string\2}%
547 \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.

```
548 \ifHy@unicode
549 \edef\8{\string\8}%
550 \edef\9{\string\9}%
551 \fontencoding{PU}%
552 \HyPsd@UTFviii
553 \def\ifpdfstringunicode###1##2{##1}%
554 \else
555 \fontencoding{PD1}%
556 \def\ifpdfstringunicode###1##2{##2}%
557 \fi
558 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
559 \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).

```
560 \@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).

```
561 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
562 \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.

```
563 \let\{\textbraceleft
564 \let\}\textbraceright
```

```

565 \let\\\textbackslash
566 \let\#\textnumbersign
567 \let\$\textdollar
568 \let\%\textpercent
569 \let\&\textampersand
570 % \let\~\textasciitilde
571 \let\_ \textunderscore
572 \let\P\textparagraph
573 \let\ldots\textellipsis
574 \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.

```

575 \def\{\pdfstringdefWarn\}%
576 \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.

```

577 \def\TeX{\TeX}%
578 \def\LaTeX{La\TeX}%
579 \def\LaTeXe{%
580   \LaTeX2%
581   \ifHy@unicode\textepsilon\else e\fi
582 }%
583 \def\eTeX{%
584   \ifHy@unicode\textepsilon\else e\fi
585   -\TeX%
586 }%
587 \def\SliTeX{Sli\TeX}%
588 \def\MF{Metafont}%
589 \def\MP{Metapost}%

```

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

```

590 \let\fontencoding\@gobble
591 \let\fontfamily\@gobble
592 \let\fontseries\@gobble
593 \let\fontshape\@gobble
594 \let\fontsize\@gobbletwo
595 \let\selectfont\@empty
596 \let\usefont\@gobblefour
597 \let\emph\@firstofone
598 \let\textnormal\@firstofone
599 \let\textrm\@firstofone
600 \let\textsf\@firstofone

```

```

601 \let\texttt\@firstofone
602 \let\textbf\@firstofone
603 \let\textmd\@firstofone
604 \let\textit\@firstofone
605 \let\textsc\@firstofone
606 \let\textsl\@firstofone
607 \let\textup\@firstofone
608 \let\normalfont\@empty
609 \let\rmfamily\@empty
610 \let\sffamily\@empty
611 \let\ttfamily\@empty
612 \let\bfseries\@empty
613 \let\mdseries\@empty
614 \let\itshape\@empty
615 \let\scshape\@empty
616 \let\slshape\@empty
617 \let\upshape\@empty
618 \let\em\@empty
619 \let\rm\@empty
620 \let\Huge\@empty
621 \let\LARGE\@empty
622 \let\Large\@empty
623 \let\footnotesize\@empty
624 \let\huge\@empty
625 \let\large\@empty
626 \let\normalsize\@empty
627 \let\scriptsize\@empty
628 \let\small\@empty
629 \let\tiny\@empty
630 \let\mathversion\@gobble
631 \let\phantom\@gobble
632 \let\vphantom\@gobble
633 \let\hphantom\@gobble

```

Package pifont.

```

634 \let\ding\HyPsd@ding
635 \let\Cube\HyPsd@DieFace
636 %* \HyPsd@DieFace -> \epsdice (epsdice)
637 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

638 \def\begin#1{\csname#1\endcsname}%
639 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

641 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
642 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

643 \ifHy@psdextra

```

```

644 \ifHy@unicode
645 \csname psdmapshortnames\endcsname
646 \csname psdaliasnames\endcsname
647 \fi
648 \fi

```

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

```

649 \let\foreignlanguage\@secondoftwo
650 \let\textlatin\@firstofone
651 \ltx@ifundefined{language@group}{-}{%
652 \csname HyPsd@babel@\language@group\endcsname
653 }%
654 \HyPsd@GreekPatch
655 \HyPsd@SpanishPatch
656 \HyPsd@RussianPatch
657 \HyPsd@BabelPatch
658 \let\@safe@activetrue\relax
659 \let\@safe@activesfalse\relax

```

Disable `\cyr`, used in `russianb.ldf`.

```
660 \let\cyr\relax
```

Redefine `\es@roman`, used in `spanish.ldf`.

```
661 \let\es@roman\@Roman
```

Package german.

```

662 \let\glqq\textglqq
663 \let\grqq\textgrqq
664 \let\glq\textglq
665 \let\grq\textgrq
666 \let\flqq\textflqq
667 \let\frqq\textfrqq
668 \let\flq\textflq
669 \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}

```

```
670 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
671 \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.

```
672 \let\hspace\HyPsd@hspace
```

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

```
673 \let\label\@gobble
674 \let\index\@gobble
675 \let\glossary\@gobble
676 \let\href\HyPsd@href
677 \let\@mkboth\@gobbletwo
```

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

```
678 \let\ref\HyPsd@ref
679 \let\pageref\HyPsd@pageref
680 \let\nameref\HyPsd@nameref
681 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
682 \let\leavevmode\@empty
683 \let\mbox\@empty
\halign causes error messages because of the template character #.
684 \def\halign{\pdfstringdefWarn\halign\@gobble}%
685 \let\ignorespaces\HyPsd@ignorespaces
686 \let\Hy@sectionAnchorHref\@gobble
687 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
688 \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 T_EX's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in #2 additional redefinitions can be added by the hook \pdfstringdef-PreHook.

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

```
689 \Hy@pdfstringtrue
690 \pdfstringdefPreHook
```

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

```
691 \HyPsd@LetUnexpandableSpace\space
692 \HyPsd@LetUnexpandableSpace\ %
693 \HyPsd@LetUnexpandableSpace~%
694 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
695 \ltx@ifundefined{@xspace}{}%
696 \let\xspace\HyPsd@ITALCORR
697 }{%
698 \let\xspace\HyPsd@XSPACE
699 }%
700 \let\/\HyPsd@ITALCORR
```

```

701 \let\bgroup\/%
702 \let\egroup\/%

```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```

703 \let\discretionary\@gobbletwo
    \@ifstar is defined in LATEX as follows:

```

```

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

```

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

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

```

704 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
705 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
706 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
707 \let\@protected@testopt\HyPsd@protected@testopt

```

Support for package 'xargs':

```

708 \let\@protected@testopt@xargs\HyPsd@protected@testopt

```

6.2.2 Expansion

There are several possibilities to expand tokens within L^AT_EX:

\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 T_EX 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. T_EX 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 L^AT_EX'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 L^AT_EX 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 T_EX, 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).

```
709 \begingroup
710 \let\GenericError\@gobblefour
711 \let\GenericWarning\@gobbletwo
712 \let\GenericInfo\@gobbletwo
```

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

```
713 \ifx\nofrenchguillemets\@undefined
714 \else
715 \nofrenchguillemets
716 \fi
```

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

```
717 \let\Hy@temp\xdef
718 \let\def\HyPsd@DefCommand
719 \let\gdef\HyPsd@DefCommand
720 \let\edef\HyPsd@DefCommand
721 \let\xdef\HyPsd@DefCommand
722 \let\futurelet\HyPsd@LetCommand
723 \let\let\HyPsd@LetCommand
724 \Hy@temp#1{#2}%
725 \endgroup
```

6.2.3 Postprocessing

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

```
726 \ifx#1\@empty
727 \else
```

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

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.

- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character `|` is appended to the string to make an outer brace to an inner one.

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

```

728 \HyPsd@ProtectSpaces#1%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
731 \global\let#1\HyPsd@String

```

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

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

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

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

```

732 \let\HyPsd@SPACEOPTI\relax
733 {%
734 \let\HyPsd@String\@empty
735 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
736 \global\let#1\HyPsd@String
737 }%
738 \expandafter\HyPsd@RemoveMask\expandafter
739 |\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.

```

740 \expandafter
741 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
742 \let\HyPsd@String\@empty
743 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
744 \global\let#1\HyPsd@String

```

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

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

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

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

```
746 \iffHy@unicode
747 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
748 \HyPsd@SPACEOPTI#1%
749 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
750 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
751 {\HyPsd@SPACEOPTI\80\273}#1%
752 \else
753 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
754 \expandafter\HyPsd@Subst\expandafter{%
755 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
756 \string\273}\HyPsd@SPACEOPTI\273}#1%
757 \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.

```
758 \iffHy@unicode
759 \HyPsd@StringSubst{\)}{\80\051}#1%
760 \HyPsd@Subst){\80\051}#1%
761 \let\HyPsd@empty\relax
762 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
763 {\HyPsd@empty\80\051}#1%
764 \else
765 \HyPsd@StringSubst{\)}{\051}#1%
766 \HyPsd@Subst){\051}#1%
767 \let\HyPsd@empty\relax
768 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
769 \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`.

```

770 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
771 \ltx@ifundefined{@xspace}{%
772 }{%
773 \let\HyPsd@xspace\relax
774 \expandafter\HyPsd@Subst\expandafter
775 {\HyPsd@XSPACE}\HyPsd@xspace#1%
776 \let\HyPsd@xspace\HyPsd@doxspace
777 }%
778 \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.

```

779 \HyPsd@Subst{---}\textemdash#1%
780 \HyPsd@Subst{--}\textendash#1%
781 % \HyPsd@Subst{fi}\textfi#1%
782 % \HyPsd@Subst{fl}\textfl#1%
783 \HyPsd@Subst{!'}\texttexclamdown#1%
784 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

785 \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.

```

786 \ifHy@unicode
787 \HyPsd@StringSubst\(\textparenleft#1%
788 \HyPsd@Subst(\textparenleft#1%
789 \else
790 \HyPsd@StringSubst\({\050}#1%
791 \HyPsd@Subst({\050}#1%
792 \HyPsd@StringSubst{\050}\string\{}#1%
793 \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.

```

794 \ifHy@unicode

```

```

795     \edef\HyPsd@SPACEOPTI{\80\040}%
796   \else
797     \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
798   \fi
799   \xdef#1{#1\@empty}%
800 \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.

```

801 \endgroup
802 \begingroup
803 \ifHy@unicode
804   \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

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

```

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

```

833   \pdfstringdefPostHook#1%
834 \endgroup
835 }

```

\Hy@pdfstringdef

```

836 \def\Hy@pdfstringdef#1#2{%
837   \pdfstringdef\Hy@gtemp{#2}%
838   \let#1\Hy@gtemp
839 }

```

6.3 Encodings

6.3.1 XeTeX

```
840 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
841 \catcode\z@=12 %
842 \ifxetex
843   \expandafter\@firstofone
844 \else
845   \let\HyPsd@XeTeXBigCharstrue\@empty
846   \let\HyPsd@XeTeXBigCharsfalse\@empty
847   \expandafter\@gobble
848 \fi
849 {%
850   \newif\ifHyPsd@XeTeXBigChars
851   \def\HyPsd@XeTeXBigCharsfalse{%
852     \global\let\ifHyPsd@XeTeXBigChars\iffalse
853   }%
854   \def\HyPsd@XeTeXBigCharstrue{%
855     \global\let\ifHyPsd@XeTeXBigChars\iftrue
856   }%
857   \def\HyPsd@ToBigChars#1{%
858     \ifHyPsd@XeTeXBigChars
859       \EdefEscapeHex\HyPsd@UnescapedString{%
860         \expandafter\@gobbletwo\HyPsd@UnescapedString
861       }%
862       \begingroup
863       \toks@{%}%
864       \escapechar=92\relax
865       \let\x\HyPsd@ToBigChar
866       \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
867       \relax\relax\relax\relax\relax\relax\relax
868       \edef\x{%
869         \endgroup
870         \gdef\noexpand#1{\the\toks@}%
871       }%
872       \x
873     \fi
874   }%
875   \def\HyPsd@ToBigChar#1#2#3#4{%
876     \ifx\relax#1\relax
877       \let\x\relax
878     \else
879       \count@=" #1#2#3#4\relax
880       \let\y\@empty
881       \lccode\z@=\count@
882       \ifnum\count@=40 % (
883         \let\y\@backslashchar
884       \else
885         \ifnum\count@=41 % )
886         \let\y\@backslashchar
887       \else
888         \ifnum\count@=92 % backslash
889         \let\y\@backslashchar
890       \else
891         \ifnum\count@=10 % newline
892         \edef\y##1{\string\n}%
893       \else
```

```

894         \ifnum\count@=13 % carriage return
895         \edef\y##1{\string\r}%
896         \fi
897     \fi
898 \fi
899 \fi
900 \fi
901 \lowercase{%
902     \toks@\expandafter{%
903         \the\expandafter\toks@
904         \y
905         ^^@%
906     }%
907 }%
908 \fi
909 \x
910 }%
911 }
912 \Hy@temp

```

6.3.2 Workaround for package linguex

```

913 \@ifpackageloaded{linguex}{%
914     \let\HyLinguex@OrgB\b
915     \let\HyLinguex@OrgC\c
916     \let\HyLinguex@OrgD\d
917     \def\HyLinguex@Restore{%
918         \let\b\HyLinguex@OrgB
919         \let\c\HyLinguex@OrgC
920         \let\d\HyLinguex@OrgD
921     }%
922     \Hy@AtEndOfPackage{%
923         \pdfstringdefDisableCommands{%
924             \ltx@ifundefined{oldb}{-}{\let\b\oldb}%
925             \ltx@ifundefined{oldc}{-}{\let\c\oldc}%
926             \ltx@ifundefined{oldd}{-}{\let\d\oldd}%
927         }%
928     }%
929 }{%
930     \let\HyLinguex@Restore\relax
931 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

932 \def\Hy@SaveCatcodeSettings#1{%
933     \expandafter\edef\csname Hy@cat@#1\endcsname{%
934         \endlinechar=\the\endlinechar\relax
935         \catcode32 \the\catcode32\relax % (space)
936         \catcode34 \the\catcode34\relax % "
937         \catcode35 \the\catcode35\relax % #
938         \catcode37 \the\catcode37\relax % (percent)
939         \catcode40 \the\catcode40\relax % (
940         \catcode41 \the\catcode41\relax % )
941         \catcode42 \the\catcode42\relax % *
942         \catcode46 \the\catcode46\relax % .
943         \catcode58 \the\catcode58\relax % :
944         \catcode60 \the\catcode60\relax % <
945         \catcode61 \the\catcode61\relax % =

```

```

946 \catcode62 \the\catcode62\relax % >
947 \catcode64 \the\catcode64\relax % @
948 \catcode91 \the\catcode91\relax % [
949 \catcode92 \the\catcode92\relax % \
950 \catcode93 \the\catcode93\relax % ]
951 \catcode123 \the\catcode123\relax % {
952 \catcode124 \the\catcode124\relax % |
953 \catcode125 \the\catcode125\relax % }
954 }%
955 \endlinechar=-1 %
956 \catcode32 10 % (space)
957 \catcode34 12 % "
958 \catcode35 6 % #
959 \catcode37 14 % (percent)
960 \catcode40 12 % (
961 \catcode41 12 % )
962 \catcode42 12 % *
963 \catcode46 12 % .
964 \catcode58 12 % :
965 \catcode60 12 % <
966 \catcode61 12 % =
967 \catcode62 12 % >
968 \catcode91 12 % [
969 \catcode92 0 % \
970 \catcode93 12 % ]
971 \catcode123 1 % {
972 \catcode124 12 % |
973 \catcode125 2 % }
974 \makeatletter
975 }

```

\Hy@RestoreCatcodeSettings

```

976 \def\Hy@RestoreCatcodeSettings#1{%
977 \csname Hy@cat@#1\endcsname
978 \expandafter\let\csname Hy@cat@#1\endcsname\relax
979 }

```

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.

```

980 \@ifundefined{T@PD1}{%
981 \Hy@SaveCatcodeSettings{pd1}%
982 \input{pd1enc.def}%
983 \Hy@RestoreCatcodeSettings{pd1}%
984 \HyLinguex@Restore
985 }{}
986 \DeclareFontFamily{PD1}{pdf}{}
987 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
988 \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`.

```

989 \def\HyPsd@LoadUnicode{%
990   \ifundefined{T@PU}{%
991     \Hy@SaveCatcodeSettings{pu}%
992     \input{puenc.def}%
993     \Hy@RestoreCatcodeSettings{pu}%
994     \HyLinguex@Restore
995   }{%
996     \DeclareFontFamily{PU}{pdf}{}%
997     \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{%
998     \DeclareFontSubstitution{PU}{pdf}{m}{n}%
999     \HyPsd@LoadExtra
1000   \let\HyPsd@LoadUnicode\relax
1001 }
```

`\HyPsd@LoadExtra`

```

1002 \def\HyPsd@LoadExtra{%
1003   \ifHy@psdextra
1004     \ltx@iffileloaded{puenc.def}{%
1005       \Hy@SaveCatcodeSettings{psdextra}%
1006       \input{psdextra.def}%
1007       \Hy@RestoreCatcodeSettings{psdextra}%
1008       \let\HyPsd@LoadExtra\relax
1009     }{%
1010     \fi
1011 }
```

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 expandable macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

1012 \def\texorpdfstring{%
1013   \ifHy@pdfstring
1014     \expandafter\@secondoftwo
1015   \else
1016     \expandafter\@firstoftwo
1017   \fi
1018 }
```

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`.

```

1019 \@ifundefined{pdfstringdefPreHook}{%
1020   \let\pdfstringdefPreHook\empty
1021 }
```

```

1022 \@ifundefined{pdfstringdefPostHook}{%
1023   \let\pdfstringdefPostHook\@gobble
1024 }{}

```

`\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 L^AT_EX commands like `\@gobble` or `\@firstofone`.

```

1025 \def\pdfstringdefDisableCommands{%
1026   \begingroup
1027   \makeatletter
1028   \HyPsd@DisableCommands
1029 }

```

`\HyPsd@DisableCommands`

```

1030 \long\def\HyPsd@DisableCommands#1{%
1031   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1032   \endgroup
1033 }

```

(Partial) fix for bug in frenchb.ldf 2010/08/21 v2.5a that destroys `\pdfstringdefDisableCommands` after usage in `\AtBeginDocument`.

```

1034 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1035 \AtBeginDocument{%
1036   \@ifundefined{pdfstringdefDisableCommands}{%
1037     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1038   }{}%
1039 }

```

`\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`.

```

1040 \def\pdfstringdefWarn#1{%
1041   \expandafter\noexpand\csname<>-string#1\endcsname
1042 }

```

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.

```
1043 \begingroup
1044 \catcode0=12 %
1045 \def\x{\endgroup
1046   \def\HyPsd@ignorespaces{%
1047     \romannumeral\expandafter'\expandafter^^@%
1048     \romannumeral'^^^@%
1049   }%
1050 }%
1051 \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`.

```
1052 \def\HyPsd@BabelPatch{%
1053   \let\HyOrg@languageshorthands\languageshorthands
1054   \let\languageshorthands\HyPsd@LanguageShorthands
1055 }
1056 \begingroup\expandafter\expandafter\expandafter\endgroup
1057 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1058   \let\HyPsd@langshort@system\@empty
1059   \def\HyPsd@LanguageShorthands#1{%
1060     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1061       \HyPsd@langshort@system
1062     \expandafter\@gobble
1063   \else
1064     \expandafter\@firstofone
1065   \fi
1066   {%
1067     \HyOrg@languageshorthands{#1}%
1068   }%
1069 }%
1070 \else
1071   \def\HyPsd@LanguageShorthands#1{%
1072     \ifnum\pdf@strcmp{#1}{system}=\z@
1073       \expandafter\@gobble
1074     \else
1075       \expandafter\@firstofone
1076     \fi
1077     {%
1078       \HyOrg@languageshorthands{#1}%
1079     }%
1080   }%
1081 }
```

```

1079 }%
1080 }%
1081 \fi
1082 \def\Hy@temp{%
1083 \ifpackageloaded{babel}{%
1084 \ifpackagelater{babel}{2008/03/16}{%
1085 \let\Hy@temp\@empty
1086 }{%
1087 \def\HyPsd@BabelPatch{%
1088 \let\HyOrg@languageshorthands\languageshorthands
1089 }%
1090 }%
1091 }{}%
1092 }
1093 \Hy@temp
1094 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1095 \newif\ifHy@next

Nothing to do for english.
1096 \ltx@ifundefined{danish@sh@}{@sel}{}{}%
1097 \def\HyPsd@babel@danish{%
1098 \declare@shorthand{danish}{"}|{}%
1099 \declare@shorthand{danish}{"}~{}-{}%
1100 }%
1101 }
1102 \ltx@ifundefined{dutch@sh@}{@sel}{}{}%
1103 \def\HyPsd@babel@dutch{%
1104 \declare@shorthand{dutch}{"}|{}%
1105 \declare@shorthand{dutch}{"}~{}-{}%
1106 }%
1107 }
1108 \ltx@ifundefined{finnish@sh@}{@sel}{}{}%
1109 \def\HyPsd@babel@finnish{%
1110 \declare@shorthand{finnish}{"}|{}%
1111 }%
1112 }
1113 \ltx@ifundefined{french@sh@}{@sel}{}{}%
1114 \def\HyPsd@babel@frenchb{%
1115 \def\guill@spacing{ }%
1116 }%
1117 }
1118 \ltx@ifundefined{german@sh@}{@sel}{}{}%
1119 \def\HyPsd@babel@german{%
1120 \declare@shorthand{german}{"}f{}f{}%
1121 \declare@shorthand{german}{"}|{}%
1122 \declare@shorthand{german}{"}~{}-{}%
1123 }%
1124 }
1125 \ltx@ifundefined{macedonian@sh@}{@sel}{}{}%
1126 \def\HyPsd@babel@macedonian{%
1127 \declare@shorthand{macedonian}{"}|{}%
1128 \declare@shorthand{macedonian}{"}~{}-{}%
1129 }%
1130 }{}
1131 \ltx@ifundefined{ngerman@sh@}{@sel}{}{}%
1132 \def\HyPsd@babel@ngerman{%
1133 \declare@shorthand{ngerman}{"}|{}%

```

```

1134 \declare@shorthand{ngerman}{"-"}{-}%
1135 }%
1136 }
1137 \ltx@ifundefined{portuges@sh@"}@sel}{-}{%
1138 \def\HyPsd@babel@portuges{%
1139 \declare@shorthand{portuges}{"}|}{-}%
1140 }%
1141 }
1142 \ltx@ifundefined{russian@sh@"}@sel}{-}{%
1143 \def\HyPsd@babel@russian{%
1144 \declare@shorthand{russian}{"}|}{-}%
1145 \declare@shorthand{russian}{"-"}{-}%
1146 }%
1147 }
1148 \ltx@ifundefined{slovene@sh@"}@sel}{-}{%
1149 \def\HyPsd@babel@slovene{%
1150 \declare@shorthand{slovene}{"}|}{-}%
1151 }%
1152 }

```

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

```

1153 \ltx@ifundefined{spanish@sh@>}@sel}{-}{%
1154 \def\HyPsd@babel@spanish{%
1155 \declare@shorthand{spanish}{<<}{\guillemotleft}%
1156 \declare@shorthand{spanish}{>>}{\guillemotright}%
1157 \declare@shorthand{spanish}{"}=}{-}%
1158 \declare@shorthand{spanish}{"-"}{-}%
1159 \declare@shorthand{spanish}{"!}{\textexclamdown}%
1160 \declare@shorthand{spanish}{"?}{\textquestiondown}%
1161 }%
1162 }
1163 \ltx@ifundefined{swedish@sh@"}@sel}{-}{%
1164 \def\HyPsd@babel@swedish{%
1165 \declare@shorthand{swedish}{"}|}{-}%
1166 \declare@shorthand{swedish}{"-"}{-}%
1167 }%
1168 }
1169 \ltx@ifundefined{ukrainian@sh@"}@sel}{-}{%
1170 \def\HyPsd@babel@ukrainian{%
1171 \declare@shorthand{ukrainian}{"}|}{-}%
1172 \declare@shorthand{ukrainian}{"-"}{-}%
1173 }%
1174 }
1175 \ltx@ifundefined{usorbian@sh@"}@sel}{-}{%
1176 \def\HyPsd@babel@usorbian{%
1177 \declare@shorthand{usorbian}{"}f}{f}%
1178 \declare@shorthand{usorbian}{"}|}{-}%
1179 }%
1180 }
1181 \ltx@ifundefined{greek@sh@\string~}@sel}{-}{%
1182 \let\HyPsd@GreekPatch\@empty
1183 }{-}%
1184 \def\HyPsd@GreekPatch{%
1185 \let\greeknumeral\HyPsd@greeknumeral
1186 \let\Greeknnumeral\HyPsd@Greeknnumeral
1187 }%
1188 }
1189 \def\HyPsd@greeknumeral#1{%

```

```

1190 \HyPsd@GreekNum\@firstoftwo{#1}%
1191 }
1192 \def\HyPsd@Greeknumeral#1{%
1193 \HyPsd@GreekNum\@secondoftwo{#1}%
1194 }
1195 \def\HyPsd@GreekNum#1#2{%
1196 \ifHy@unicode
1197 \ifnum#2<\@ne
1198 \@arabic{#2}%
1199 \else
1200 \ifnum#2<1000000 %
1201 \HyPsd@@GreekNum#1{#2}%
1202 \else
1203 \@arabic{#2}%
1204 \fi
1205 \fi
1206 \else
1207 \@arabic{#2}%
1208 \fi
1209 }
1210 \def\HyPsd@@GreekNum#1#2{%
1211 \ifnum#2<\@m
1212 \ifnum#2<10 %
1213 \expandafter\HyPsd@GreekNumI
1214 \expandafter\@gobble\expandafter#1\number#2%
1215 \else
1216 \ifnum#2<100 %
1217 \expandafter\HyPsd@GreekNumII
1218 \expandafter\@gobble\expandafter#1\number#2%
1219 \else
1220 \expandafter\HyPsd@GreekNumIII
1221 \expandafter\@gobble\expandafter#1\number#2%
1222 \fi
1223 \fi
1224 \ifnum#2>\z@
1225 \textnumeralsigngreek
1226 \fi
1227 \else
1228 \ifnum#2<\@M
1229 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1230 \else
1231 \ifnum#2<100000 %
1232 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1233 \else
1234 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1235 \fi
1236 \fi
1237 \fi
1238 }
1239 \def\HyPsd@GreekNumI#1#2#3{%
1240 #1{%
1241 \ifnum#3>\z@
1242 \textnumeralsignlowergreek
1243 \fi
1244 }%
1245 \expandafter#2%
1246 \ifcase#3 %

```

```

1247  {}{}%
1248  \or\textalpha\textAlpha
1249  \or\textbeta\textBeta
1250  \or\textgamma\textGamma
1251  \or\textdelta\textDelta
1252  \or\textepsilon\textEpsilon
1253  \or\textstigmagreek\textStigmagreek
1254  \or\textzeta\textZeta
1255  \or\texteta\textEta
1256  \or\texttheta\textTheta
1257  \else
1258  {}{}%
1259  \fi
1260 }
1261 \def\HyPsd@GreekNumII#1#2#3#4{%
1262   #1{%
1263     \ifnum#3>\z@
1264       \textnumeralsignlowergreek
1265     \fi
1266   }%
1267   \expandafter#2%
1268   \ifcase#3 %
1269     {}{}%
1270     \or\textiota\textIota
1271     \or\textkappa\textKappa
1272     \or\textlambda\textLambda
1273     \or\textmu\textMu
1274     \or\textnu\textNu
1275     \or\textxi\textXi
1276     \or\textomicron\textOmicron
1277     \or\textpi\textPi
1278     \or\textkoppagreek\textKoppagreek
1279     \else
1280       {}{}%
1281     \fi
1282   \HyPsd@GreekNumI#1#2#4%
1283 }
1284 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1285   #1{%
1286     \ifnum#3>\z@
1287       \textnumeralsignlowergreek
1288     \fi
1289   }%
1290   \expandafter#2%
1291   \ifcase#3 %
1292     {}{}%
1293     \or\extrho\textRho
1294     \or\textsigma\textSigma
1295     \or\texttau\textTau
1296     \or\textupsilon\textUpsilon
1297     \or\textphi\textPhi
1298     \or\textchi\textChi
1299     \or\textpsi\textPsi
1300     \or\textomega\textOmega
1301     \or\textsampigreek\textSampigreek
1302     \else
1303       {}{}%

```

```

1304 \fi
1305 \HyPsd@GreekNumII#1#2#4#5%
1306 }
1307 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1308 \HyPsd@GreekNumI\@firstofone#1#2%
1309 \HyPsd@@@GreekNum#1{#3#4#5}%
1310 }
1311 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1312 \HyPsd@GreekNumII\@firstofone#1#2#3%
1313 \HyPsd@@@GreekNum#1{#4#5#6}%
1314 }
1315 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1316 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1317 \HyPsd@@@GreekNum#1{#5#6#7}%
1318 }

1319 \def\HyPsd@SpanishPatch{%
1320 \ltx@ifundefined{es@save@dot}{%
1321 }{%
1322 \let\.\es@save@dot
1323 }%
1324 }

```

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

```

1325 \def\HyPsd@RussianPatch{%
1326 \ltx@ifundefined{russian@sh@"@-@}{%
1327 }{%
1328 \@namedef{russian@sh@"@-@}{-}%
1329 }%
1330 }

```

6.5.3 CJK patch

```
1331 \RequirePackage{intcalc}[2007/09/27]
```

\HyPsd@CJKhook

```

1332 \def\HyPsd@CJKhook{%
1333 \ltx@ifpackageloaded{CJK}{%
1334 \let\CJK@kern\relax
1335 \let\CJKkern\relax
1336 \let\CJK@CJK\relax
1337 \ifHy@CJKbookmarks
1338 \HyPsd@CJKhook@bookmarks
1339 \fi
1340 \HyPsd@CJKhook@unicode
1341 }{}%
1342 }

```

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 ($\geq 0x40$).

```

1343 \begingroup
1344 \catcode"7F=\active
1345 \toks@{%
1346 \let\CJK@ignorespaces\empty
1347 \def\CJK@char#1{\@gobbletwo}%
1348 \let\CJK@charx\@gobblefour
1349 \let\CJK@punctchar\@gobblefour
1350 \def\CJK@punctcharx#1{\@gobblefour}%
1351 \catcode"7F=\active
1352 \def^^7f#1^^7f#2^^7f{%
1353 \string #1\HyPsd@DecimalToOctal{#2}%
1354 }%
1355 % ... ?
1356 \ifHy@unicode
1357 \def\Hy@cjkpu{\80}%
1358 \else
1359 \let\Hy@cjkpu\@empty
1360 \fi
1361 \HyPsd@CJKActiveChars
1362 }%
1363 \count@=127 %
1364 \@whilenum\count@<255 \do{%
1365 \advance\count@ by 1 %
1366 \lccode'\-=\count@
1367 \lowercase{%
1368 \toks@\expandafter{\the\toks@ ~}%
1369 }%
1370 }%
1371 \toks@\expandafter{\the\toks@ !}%
1372 \xdef\HyPsd@CJKhook@bookmarks{%
1373 \the\toks@
1374 }%
1375 \endgroup

```

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

```

1376 \def\HyPsd@CJKActiveChars#1{%
1377 \ifx#1!%
1378 \let\HyPsd@CJKActiveChars\relax
1379 \else
1380 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1381 \fi
1382 \HyPsd@CJKActiveChars
1383 }

```

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

```

1384 \def\HyPsd@DecimalToOctal#1{%
1385 \ifcase #1 %
1386 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1387 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1388 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1389 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1390 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1391 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1392 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%

```

```

1393 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1394 \or @\or A\or B\or C\or D\or E\or F\or G%
1395 \or H\or I\or J\or K\or L\or M\or N\or O%
1396 \or P\or Q\or R\or S\or T\or U\or V\or W%
1397 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1398 \or \140\or a\or b\or c\or d\or e\or f\or g%
1399 \or h\or i\or j\or k\or l\or m\or n\or o%
1400 \or p\or q\or r\or s\or t\or u\or v\or w%
1401 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1402 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1403 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1404 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1405 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1406 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1407 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1408 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1409 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1410 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1411 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1412 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1413 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1414 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1415 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1416 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1417 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1418 \fi
1419 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1420 \def\HyPsd@CJKhook@unicode{%
1421 \let\Unicode\HyPsd@CJK@Unicode
1422 \let\CJKnumber\HyPsd@CJKnumber
1423 \let\CJKdigits\HyPsd@CJKdigits
1424 }

```

\HyPsd@CJK@Unicode

```

1425 \def\HyPsd@CJK@Unicode#1#2{%
1426 \ifnum#1<256 %
1427 \HyPsd@DecimalToOctalFirst{#1}%
1428 \HyPsd@DecimalToOctalSecond{#2}%
1429 \else
1430 \933%
1431 \expandafter\expandafter\expandafter\HyPsd@HighA
1432 \intcalcDiv{#1}{4}!%
1433 \933%
1434 \ifcase\intcalcMod{#1}{4} %
1435 4\or 5\or 6\or 7%
1436 \fi
1437 \HyPsd@DecimalToOctalSecond{#2}%
1438 \fi
1439 }

1440 \def\HyPsd@HighA#1!{%
1441 \expandafter\expandafter\expandafter\HyPsd@HighB
1442 \IntCalcDiv#1!64!!%

```

```

1443 \expandafter\expandafter\expandafter\HyPsd@HighD
1444 \IntCalcMod#1!64!!%
1445 }
1446 \def\HyPsd@HighB#1!{%
1447 \expandafter\expandafter\expandafter\HyPsd@HighC
1448 \IntCalcDec#1!!%
1449 }
1450 \def\HyPsd@HighC#1!{%
1451 \IntCalcDiv#1!4!%
1452 \@backslashchar
1453 \IntCalcMod#1!4!%
1454 }
1455 \def\HyPsd@HighD#1!{%
1456 \ifcase\IntCalcDiv#1!8! %
1457 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1458 \fi
1459 \ifcase\IntCalcMod#1!8! %
1460 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1461 \fi
1462 }
1463 \def\HyPsd@DecimalToOctalFirst#1!{%
1464 \9%
1465 \ifcase#1 %
1466 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1467 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1468 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1469 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1470 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1471 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1472 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1473 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1474 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1475 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1476 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1477 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1478 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1479 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1480 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1481 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1482 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1483 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1484 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1485 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1486 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1487 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1488 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1489 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1490 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1491 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1492 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1493 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1494 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1495 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1496 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1497 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1498 \fi
1499 }

```

```

1500 \def\HyPsd@DecimalToOctalSecond#1{%
1501   \ifcase #1 %
1502     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1503     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1504     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1505     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1506     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1507     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1508     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1509     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1510     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1511     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1512     \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1513     \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1514     \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1515     \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1516     \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1517     \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1518     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1519     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1520     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1521     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1522     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1523     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1524     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1525     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1526     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1527     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1528     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1529     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1530     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1531     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1532     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1533     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1534   \fi
1535 }

1536 \def\HyPsd@CJKnumber#1{%
1537   \ifnum#1<\z@
1538     \CJK@minus
1539     \expandafter\HyPsd@@@CJKnumber\expandafter{\number-\number#1}%
1540   \else
1541     \expandafter\HyPsd@@@CJKnumber\expandafter{\number#1}%
1542   \fi
1543 }

1544 \def\HyPsd@@@CJKnumber#1{%
1545   \ifcase#1 %
1546     \CJK@zero\or \CJK@one\or \CJK@two\or \CJK@three\or \CJK@four\or
1547     \CJK@five\or \CJK@six\or \CJK@seven\or \CJK@eight\or \CJK@nine\or
1548     \CJK@ten\or \CJK@ten\or \CJK@one\or \CJK@ten\or \CJK@two\or
1549     \CJK@ten\or \CJK@three\or \CJK@ten\or \CJK@four\or \CJK@ten\or \CJK@five\or
1550     \CJK@ten\or \CJK@six\or \CJK@ten\or \CJK@seven\or \CJK@ten\or \CJK@eight\or
1551     \CJK@ten\or \CJK@nine
1552   \else
1553     \ifnum#1<10000 %
1554       \HyPsd@CJKnumberFour#1!\@empty{20}%
1555     \@empty
1556   \else

```

```

1557 \ifnum#1<100000000 %
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcDiv#1!10000!%
1560 !#{20}%
1561 \CJK@tenthousand
1562 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1563 \IntCalcMod#1!10000!%
1564 !\CJK@zero{10}%
1565 \@empty
1566 \else
1567 \expandafter\HyPsd@CJKnumberLarge
1568 \number\IntCalcDiv#1!100000000!\expandafter!%
1569 \number\IntCalcMod#1!100000000!!%
1570 \fi
1571 \fi
1572 \fi
1573 }
1574 \def\HyPsd@CJKnumberLarge#1!#2!{%
1575 \HyPsd@CJKnumberFour#1!#{20}%
1576 \CJK@hundredmillion
1577 \ifnum#2=\z@
1578 \else
1579 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580 \IntCalcDiv#2!10000!%
1581 !\CJK@zero{10}%
1582 \CJK@tenthousand
1583 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1584 \IntCalcMod#2!10000!%
1585 !\CJK@zero{10}%
1586 \@empty
1587 \fi
1588 }
1589 \def\HyPsd@CJKnumberFour#1!#2#3{%
1590 \ifnum#1=\z@
1591 \expandafter\@gobble
1592 \else
1593 \ifnum#1<1000 %
1594 #2%
1595 \HyPsd@CJKnumberThree#1!#{3}%
1596 \else
1597 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1598 \CJK@thousand
1599 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1600 \IntCalcMod#1!1000!%
1601 !\CJK@zero{10}%
1602 \fi
1603 \fi
1604 }
1605 \def\HyPsd@CJKnumberThree#1!#2#3{%
1606 \ifnum#1=\z@
1607 \else
1608 \ifnum#1<100 %
1609 #2%
1610 \HyPsd@CJKnumberTwo#1!#{3}%
1611 \else
1612 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1613 \CJK@hundred

```

```

1614 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1615 \IntCalcMod#1!100!%
1616 !\CJK@zero{10}%
1617 \fi
1618 \fi
1619 }
1620 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1621 \ifnum#1=\z@
1622 \else
1623 \ifnum#1<#3 %
1624 #2%
1625 \HyPsd@@CJKnumber{#1}%
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1628 \CJK@ten
1629 \ifnum\IntCalcMod#1!10!=\z@
1630 \else
1631 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1632 \fi
1633 \fi
1634 \fi
1635 }
1636 \def\HyPsd@CJKdigits#1{%
1637 \ifx*#1\relax
1638 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1639 \else
1640 \HyPsd@@CJKdigits\CJK@null{#1}%
1641 \fi
1642 }
1643 \def\HyPsd@@CJKdigits#1#2{%
1644 \ifx\#2\%
1645 \else
1646 \HyPsd@@@CJKdigits#1#2\@nil
1647 \fi
1648 }%
1649 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1650 \HyPsd@CJKdigit#1{#2}%
1651 \ifx\#3\%
1652 \expandafter\@gobble
1653 \else
1654 \expandafter\@firstofone
1655 \fi
1656 {%
1657 \HyPsd@@@CJKdigits#1#3\@nil
1658 }%
1659 }
1660 \def\HyPsd@CJKdigit#1#2{%
1661 \ifcase#2 %
1662 #1\or
1663 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1664 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1665 \fi
1666 }

```

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 `\@typesetprotect` (`=\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}

1667 \def\HyPsd@inmathwarn#1#2{%
1668   \ifx#2\expandafter
1669     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1670       \HyPsd@GLYPHERR
1671       \expandafter\@gobble\string#1%
1672       >%
1673       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1674     \else
1675       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1676     \fi
1677   \else
1678     \expandafter#2%
1679   \fi

```

```

1680 }
1681 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1682 \def\HyPsd@EndWithElse#1\else{else}

```

\HyPsd@add@accent

```

1683 \def\HyPsd@add@accent#1#2{%
1684   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1685   #2%
1686 }%

```

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.

```

1687 \def\HyPsd@LetUnexpandableSpace#1{%
1688   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1689 }

```

\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.

```

1690 \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.

```

1691 \edef\HyPsd@XSPACE{\string#\string X}
1692 \edef\HyPsd@ITALCORR{\string#\string I}
1693 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1694 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

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

```

1695 \def\HyPsd@@hspace#1*#2\END{%
1696   \ifx\#2\%
1697     \HyPsd@hspacetest{#1}%
1698   \else
1699     \expandafter\HyPsd@hspacetest
1700   \fi
1701 }

```

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

```

1702 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1703 \ltx@ifundefined{tocsection}{%
1704   \let\HyPsd@AMSclassfix\relax
1705 }{%
1706   \def\HyPsd@AMSclassfix{%
1707     \let\tocpart\HyPsd@tocsection
1708     \let\tocchapter\HyPsd@tocsection
1709     \let\tocappendix\HyPsd@tocsection
1710     \let\tocsection\HyPsd@tocsection
1711     \let\tocsubsection\HyPsd@tocsection
1712     \let\tocsubsubsection\HyPsd@tocsection
1713     \let\tocparagraph\HyPsd@tocsection
1714   }%
1715   \def\HyPsd@tocsection#1#2#3{%
1716     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1717     #3%
1718   }%
1719 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1720 \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.

```

1721 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1722 \def\HyPsd@@ref#1*#2\END{%
1723   \ifx\#2\%
1724     \HyPsd@@@ref{#1}%
1725   \else
1726     \expandafter\HyPsd@@@ref
1727   \fi
1728 }%

```

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

```

1729 \def\HyPsd@@@ref#1{%
1730   \expandafter\ifx\csname r@#1\endcsname\relax
1731     ??%
1732   \else
1733     \expandafter\expandafter\expandafter
1734     \@car\csname r@#1\endcsname\@nil
1735   \fi
1736 }

```

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

```

1737 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1738 \def\HyPsd@@pageref#1*#2\END{%
1739   \ifx\#2\%
1740     \HyPsd@@@pageref{#1}%
1741   \else
1742     \expandafter\HyPsd@@@pageref

```

```

1743 \fi
1744 }

```

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

```

1745 \def\HyPsd@@@pageref#1{%
1746   \expandafter\ifx\csname r@#1\endcsname\relax
1747     ??%
1748   \else
1749     \expandafter\expandafter\expandafter\expandafter
1750     \expandafter\expandafter\expandafter\@car
1751     \expandafter\expandafter\expandafter\@gobble
1752     \csname r@#1\endcsname{}\@nil
1753   \fi
1754 }

```

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

```

1755 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1756 \def\HyPsd@@nameref#1*#2\END{%
1757   \ifx\#2\%
1758     \HyPsd@@@nameref{#1}%
1759   \else
1760     \expandafter\HyPsd@@@nameref
1761   \fi
1762 }

```

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

```

1763 \def\HyPsd@@@nameref#1{%
1764   \expandafter\ifx\csname r@#1\endcsname\relax
1765     ??%
1766   \else
1767     \expandafter\expandafter\expandafter\expandafter
1768     \expandafter\expandafter\expandafter\@car
1769     \expandafter\expandafter\expandafter\@gobbletwo
1770     \csname r@#1\endcsname{}\@nil
1771   \fi
1772 }

```

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

```

1773 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1774 \def\HyPsd@@autoref#1*#2\END{%
1775   \ifx\#2\%
1776     \HyPsd@@@autoref{#1}%
1777   \else
1778     \expandafter\HyPsd@@@autoref
1779   \fi
1780 }

```

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

```

1781 \def\HyPsd@@@autoref#1{%
1782   \expandafter\ifx\csname r@#1\endcsname\relax

```

```

1783   ??%
1784   \else
1785     \expandafter\expandafter\expandafter\HyPsd@autorefname
1786       \csname r@#1\endcsname\}\}\}\}\@nil
1787     \expandafter\expandafter\expandafter
1788       \@car\csname r@#1\endcsname\@nil
1789   \fi
1790 }

```

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

```

1791 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1792   \ifx\#4\%
1793   \else
1794     \HyPsd@@autorefname#4.\@nil
1795   \fi
1796 }

```

`\HyPsd@@autorefname`

```

1797 \def\HyPsd@@autorefname#1.#2\@nil{%
1798   \ltx@ifundefined{#1autorefname}{%
1799     \ltx@ifundefined{#1name}{%
1800     }{%
1801       \csname#1name\endcsname\space
1802     }%
1803   }{%
1804     \csname#1autorefname\endcsname\space
1805   }%
1806 }

```

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 1807 \begingroup
1808   \def\x#1#2{%
1809     \endgroup
1810     \let#1\def
1811     \def\HyPsd@DefCommand##1##2###{%
1812       #1%
1813       \expandafter\noexpand
1814       \csname\expandafter\@gobble\string##1\@empty\endcsname
1815       \@gobble
1816     }%
1817     \let#2\let
1818     \def\HyPsd@@LetCommand##1{%
1819       \expandafter\ifx\csname##1\expandafter\endcsname
1820         \csname iftrue\endcsname
1821       \pdfstringdefWarn\let
1822       \expandafter\@gobble
1823     \else
1824       \expandafter\ifx\csname##1\expandafter\endcsname
1825         \csname iffalse\endcsname
1826       \pdfstringdefWarn\let
1827       \expandafter\expandafter\expandafter\@gobble
1828     \else
1829       #2%
1830       \expandafter\noexpand
1831       \csname##1\expandafter\expandafter\expandafter\endcsname
1832     \fi
1833   \fi
1834 }%
1835 }%
1836 \expandafter\x\csname <def>-command\expandafter\endcsname
1837   \csname <let>-command\endcsname
1838 \def\HyPsd@LetCommand#1{%
1839   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1840   \expandafter\expandafter\expandafter{%
1841     \expandafter\@gobble\string#1\@empty
1842   }%
1843 }

```

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).

```

1844 \def\HyPsd@ifnextchar#1{%
1845   \pdfstringdefWarn#1%

```

```

1846 \expandafter\@gobbletwo\@gobble
1847 }

```

6.5.14 \@protected@testopt@ifnextchar

\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.

```

1848 \def\HyPsd@protected@testopt#1{%
1849   \pdfstringdefWarn#1%
1850   \@gobbletwo
1851 }

```

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:

```

1852 \def\HyPsd@Warning#1{%
1853   \begingroup
1854   \let\space\ltx@space
1855   \Hy@Warning{#1}%
1856 \endgroup
1857 }

```

6.6.2 Protecting spaces

```

1858 \RequirePackage{etexcmds}[2007/09/09]
1859 \ifetex@unexpanded
1860   \expandafter\@secondoftwo
1861 \else
1862   \expandafter\@firstoftwo
1863 \fi
1864 {%

```

\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.

```

1865 \def\HyPsd@ProtectSpaces#1{%
1866   \iftrue
1867     \expandafter\HyPsd@@ProtectSpacesFi
1868     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1869   \fi
1870 }%

```

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

```

1871 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1872   \fi
1873   \ifx\scrollmode#2\scrollmode

```

```

1874 \HyPsd@RemoveMask#1\HyPsd@End#3%
1875 \else
1876 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1877 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1878 \fi
1879 }%

```

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.

```

1880 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1881 \toks\expandafter{#1}%
1882 \xdef#2{\the\toks@}%
1883 }%

1884 }{%
1885 \let\HyPsd@fi\fi
1886 \def\HyPsd@ProtectSpaces#1{%
1887 \xdef#1{%
1888 \iftrue
1889 \expandafter\HyPsd@@ProtectSpacesFi
1890 \expandafter|\expandafter\@empty#1| %
1891 \HyPsd@fi
1892 }%
1893 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1894 }%
1895 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1896 \fi
1897 \etex@unexpanded{#1}%
1898 \ifx\scrollmode#2\scrollmode
1899 \else
1900 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1901 \HyPsd@fi
1902 }%
1903 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1904 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1905 }%
1906 }

```

6.6.3 Remove grouping braces

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

```

1907 \def\HyPsd@RemoveBraces#1{%
1908 \ifx\scrollmode#1\scrollmode
1909 \else
1910 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1911 \fi
1912 }

```

`\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`.

```

1913 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1914   \fi
1915   \def\Hy@temp@A{#1#2}%
1916   \def\Hy@temp@B{#3}%
1917   \ifx\Hy@temp@A\Hy@temp@B
1918     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1919       \HyPsd@String#1%
1920     }%
1921     \ifx\scrollmode#2\scrollmode
1922     \else
1923       \Hy@ReturnAfterFiFiEnd{%
1924         \HyPsd@RemoveBraces{#2}%
1925       }%
1926     \fi
1927   \else
1928     \def\Hy@temp@A{#1}%
1929     \HyPsd@AppendItalcorr\HyPsd@String
1930     \ifx\Hy@temp@A\@empty
1931       \Hy@ReturnAfterElseFiFiEnd{%
1932         \HyPsd@RemoveBraces{#2}%
1933       }%
1934     \else
1935       \HyPsd@ProtectSpaces\Hy@temp@A
1936       \HyPsd@AppendItalcorr\Hy@temp@A
1937       \Hy@ReturnAfterFiFiEnd{%
1938         \expandafter\HyPsd@RemoveBraces\expandafter
1939           {\Hy@temp@A#2}%
1940       }%
1941     \fi
1942   \fi
1943   \Hy@ReturnEnd
1944 }
```

`\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`.

```

1945 \def\HyPsd@AppendItalcorr#1{%
1946   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1947 }
1948 \def\HyPsd@@AppendItalcorr#1#2{%
1949   \expandafter\def\expandafter#2\expandafter{#2#1}%
1950 }
```

6.6.4 Catcode check

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

```

1951 \ltx@ifundefined{directlua}{%
1952 }{%
1953   \expandafter\ifx\csname\endcsname\relax\fi
```

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`.

```

1955 \begingroup
1956   \catcode'\Q=\active
1957   \let Q\ltx@empty
1958   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1959     \global\let\HyPsd@Rest\relax
1960     \ifcat\relax\noexpand#1\relax
1961       \ifx#1\protect
1962         \else
1963           \ifx#1\penalty
1964             \setbox\z@=\hbox{%
1965               \afterassignment\HyPsd@AfterCountRemove
1966               \count@=#2\HyPsd@End
1967             }%
1968           \else
1969             \ifx#1\kern
1970               \setbox\z@=\hbox{%
1971                 \afterassignment\HyPsd@AfterDimenRemove
1972                 \dimen@=#2\HyPsd@End
1973               }%
1974             \else
1975               \ifx#1\hskip
1976                 \setbox\z@=\hbox{%
1977                   \afterassignment\HyPsd@AfterSkipRemove
1978                   \skip@=#2\HyPsd@End
1979                 }%
1980               \else
1981                 \HyPsd@CatcodeWarning{#1}%
1982               \fi
1983             \fi
1984           \fi
1985         \fi
1986       \else
1987         \ifcat\noexpand#1\noexpandQ% active character
1988           \expandafter\expandafter\expandafter\def
1989           \expandafter\expandafter\expandafter\HyPsd@String
1990           \expandafter\expandafter\expandafter{%
1991             \expandafter\HyPsd@String\string#1%
1992           }%
1993         \else
1994           \ifcat#1A% letter

```

```

1995     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1996     \HyPsd@String#1%
1997     }%
1998     \else
1999     \ifcat#1 % SPACE
2000     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2001     \HyPsd@String\HyPsd@SPACEOPTI
2002     }%
2003     \else
2004     \ifcat$#1%
2005     \HyPsd@CatcodeWarning{math shift}%
2006     \else
2007     \ifcat&#1%
2008     \HyPsd@CatcodeWarning{alignment tab}%
2009     \else
2010     \ifcat^#1%
2011     \HyPsd@CatcodeWarning{superscript}%
2012     \else
2013     \ifcat_#1%
2014     \HyPsd@CatcodeWarning{subscript}%
2015     \else
2016     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2017     \HyPsd@String#1%
2018     }%
2019     \fi
2020     \fi
2021     \fi
2022     \fi
2023     \fi
2024     \fi
2025     \fi
2026     \fi
2027     \ifx\HyPsd@Rest\relax
2028     \ifx\scrollmode#2\scrollmode
2029     \else
2030     \Hy@ReturnAfterFiFiEnd{%
2031     \HyPsd@CheckCatcodes#2\HyPsd@End
2032     }%
2033     \fi
2034     \else
2035     \ifx\HyPsd@Rest\@empty
2036     \else
2037     \Hy@ReturnAfterFiFiEnd{%
2038     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2039     }%
2040     \fi
2041     \fi
2042     \Hy@ReturnEnd
2043     }%
2044 \endgroup

```

Remove counts, dimens, skips.

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

```

2045 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2046   \gdef\HyPsd@Rest{#1}%
2047 }

```

`\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.

```

2048 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2049   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2050     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2051     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2052   \else
2053     \ifdim\dimen@=\z@
2054     \else
2055       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2056     \fi
2057     \gdef\HyPsd@Rest{#1}%
2058   \fi
2059 }
```

`\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).

```

2060 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2061   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2062     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2063     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2064   \else
2065     \ifdim\skip@=\z@
2066     \else
2067       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2068     \fi
2069     \gdef\HyPsd@Rest{#1}%
2070   \fi
2071 }
```

Catcode warnings.

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

```

2072 \def\HyPsd@CatcodeWarning#1{%
2073   \HyPsd@Warning{%
2074     Token not allowed in a PDF string (%
2075     \ifHy@unicode
2076       Unicode%
2077     \else
2078       PDFDocEncoding%
2079     \fi
2080   ):%
2081   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
2082 }%
2083 }
2084 \begingroup
2085 \catcode'\|=0 %
2086 \catcode'\|=12 %
2087 \gdef\HyPsd@RemoveCmdPrefix#1{%
2088   \expandafter\HyPsd@@RemoveCmdPrefix
2089   \string#1\@empty\<>-|\@empty|\@empty
2090 }%
2091 \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2092 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
2093 \def\HyPsd@RemoveSpaceWarning#1{%
2094   \HyPsd@Warning{%
2095     Token not allowed in a PDF string (%
2096     \ifHy@unicode
2097       Unicode%
2098     \else
2099       PDFDocEncoding%
2100     \fi
2101   ):%
2102   \MessageBreak #1\MessageBreak
2103   removed%
2104 }%
2105 }
```

\HyPsd@ReplaceSpaceWarning

```
2106 \def\HyPsd@ReplaceSpaceWarning#1{%
2107   \HyPsd@Warning{%
2108     Token not allowed in a PDF string (%
2109     \ifHy@unicode
2110       Unicode%
2111     \else
2112       PDFDocEncoding%
2113     \fi
2114   ):%
2115   \MessageBreak #1\MessageBreak
2116   replaced by space%
2117 }%
2118 }
```

6.6.5 Check for wrong glyphs

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

```
2119 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2120   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2121     \HyPsd@String#1%
2122   }%
2123   \ifx\#2\%
2124   \else
2125     \ltx@ReturnAfterFi{%
2126       \HyPsd@GlyphProcessWarning#2\@empty
2127     }%
2128   \fi
2129 }
2130 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2131   \HyPsd@@@GlyphProcessWarning#1++>%
2132   \HyPsd@GlyphProcess#2\@empty
2133 }
2134 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2135   \ifx\#2\%
2136     \HyPsd@Warning{%
2137       Glyph not defined in %
2138       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2139       removing '@backslashchar#1'%
2140     }%
2141   \else
```

```

2142 \HyPsd@Warning{%
2143   Composite letter '@backslashchar#1+#2'\MessageBreak
2144   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2145   \MessageBreak
2146   removing '@backslashchar#1'%
2147 }%
2148 \fi
2149 }

```

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`.

```

2150 \def\HyPsd@spaceopti#1{ % first space
2151   \ifx\HyPsd@spaceopti#1%
2152     \040%
2153   \else
2154     #1%
2155   \fi
2156 }%

```

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.
2157 \def\HyPsd@Subst#1#2#3{%
2158   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2159     \fi
2160     ##1%
2161     \ifx\scrollmode##2\scrollmode
2162     \else
2163       #2%
2164       \HyPsd@@ReplaceFi##2\END
2165     \fi
2166   }%
2167   \xdef#3{%
2168     \iftrue
2169       \expandafter\HyPsd@@ReplaceFi#3#1\END
2170     \fi
2171   }%
2172 }

```

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

```

2173 \def\HyPsd@StringSubst#1{%
2174   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2175 }

```

`\HyPsd@EscapeTeX`

```

2176 \begingroup

```

```

2177 \lccode'\!=\'%%
2178 \lccode'\|=\'%%
2179 \lccode'\(=\{\'%
2180 \lccode'\)=\'%
2181 \lccode'0=\ltx@zero
2182 \lccode'1=\ltx@zero
2183 \lccode'3=\ltx@zero
2184 \lccode'4=\ltx@zero
2185 \lccode'5=\ltx@zero
2186 \lccode'7=\ltx@zero
2187 \lowercase{\endgroup
2188 \def\HyPsd@EscapeTeX#1{%
2189   \HyPsd@Subst!{|045}#1%
2190   \HyPsd@Subst({|173}#1%
2191   \HyPsd@Subst){|175}#1%
2192 }%
2193 }

```

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.

```

2194 \def\HyPsd@doxspace#1{%
2195   \ifx#1\relax\else
2196     \ifx#1.\else
2197       \ifx#1:\else
2198         \ifx#1,\else
2199           \ifx#1;\else
2200             \ifx#1!\else
2201               \ifx#1?\else
2202                 \ifx#1/\else
2203                   \ifx#1-\else
2204                     \ifx#1'\else
2205                       \HyPsd@SPACEOPTI
2206                     \fi
2207                   \fi
2208                 \fi
2209               \fi
2210             \fi
2211           \fi
2212         \fi
2213       \fi
2214     \fi
2215   \fi
2216   #1%
2217 }%

```

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.

```

2218 \begingroup
2219 \catcode'\|=0 %
2220 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```
2221 |gdef|HyPsd@ConvertToUnicode#1{%
2222 |xdef#1{%
2223 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2224 }%
2225 |ifx#1|@empty
2226 |else
2227 |xdef#1{%
2228 \376\377%
2229 #1%
2230 }%
2231 |fi
2232 }%
```

\HyPsd@DoConvert

```
2233 |gdef|HyPsd@DoConvert#1{%
2234 |ifx#1|@empty
2235 |else
2236 |ltx@ReturnAfterFi{%
2237 |ifx#1\%%
2238 \%%
2239 |expandafter|HyPsd@DoEscape
2240 |else
2241 |HyPsd@Char{#1}%
2242 |expandafter|HyPsd@DoConvert
2243 |fi
2244 }%
2245 |fi
2246 }%
```

\HyPsd@DoEscape

```
2247 |gdef|HyPsd@DoEscape#1{%
2248 |ifx#19%
2249 |expandafter|HyPsd@GetTwoBytes
2250 |else
2251 |ltx@ReturnAfterFi{%
2252 |ifx#18%
2253 00%
2254 |expandafter|HyPsd@GetTwoBytes
2255 |else
2256 #1%
2257 |expandafter|HyPsd@GetOneByte
2258 |fi
2259 }%
2260 |fi
2261 }%
```

\HyPsd@GetTwoBytes

```
2262 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2263 #1\#2#3#4%
2264 |HyPsd@DoConvert
2265 }%
```

\HyPsd@GetOneByte

```
2266 |gdef|HyPsd@GetOneByte#1#2{%
2267 #1#2%
2268 |HyPsd@DoConvert
```

```

2269 }%
2270 |endgroup

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more
arguments.
2271 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2272 \xdef#4{#4#1#2}%
2273 \HyPsd@@ConvertToUnicode#3\END#4%
2274 }

\HyPsd@Char
2275 \begingroup
2276 \catcode0=9 %
2277 \catcode'\^=7 %
2278 \catcode'\^^=12 %
2279 \def\x{^^^0000}%
2280 \expandafter\endgroup
2281 \ifx\x\@empty
2282 \def\HyPsd@Char#1{%
2283 \ifnum'#1<128 %
2284 \@backslashchar 000#1%
2285 \else
2286 \ifnum'#1<65536 %
2287 \expandafter\HyPsd@CharTwoByte\number'#1!%
2288 \else
2289 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2290 \intcalcSub{'#1}{65536}!%
2291 \fi
2292 \fi
2293 }%
2294 \def\HyPsd@CharTwoByte#1!{%
2295 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2296 \IntCalcDiv#1!256!!%
2297 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2298 \IntCalcMod#1!256!!%
2299 }%
2300 \def\HyPsd@CharOctByte#1!{%
2301 \@backslashchar
2302 \IntCalcDiv#1!64!%
2303 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2304 \IntCalcMod#1!8!%
2305 }%
2306 \def\HyPsd@CharSurrogate#1!{%
2307 \@backslashchar 33%
2308 \IntCalcDiv#1!262144!%
2309 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2310 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2311 \@backslashchar 33%
2312 \expandafter\expandafter\expandafter\IntCalcAdd
2313 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2314 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2315 \IntCalcMod#1!256!!%
2316 }%
2317 \else
2318 \def\HyPsd@Char#1{%
2319 \@backslashchar 000#1%
2320 }%
2321 \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

2322 \begingroup\expandafter\expandafter\expandafter\endgroup
2323 \expandafter\ifx\csname numexpr\endcsname\relax
2324   \let\HyPsd@UTFviii\relax
2325 \else
2326   \begingroup
2327     \lccode'\~='^f4\relax
2328   \lowercase{\endgroup
2329     \def\HyPsd@UTFviii{%
2330       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2331       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2332       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2333       \ifx~\HyPsd@UTFviii@ccxliv@undef
2334         \let~\HyPsd@UTFviii@ccxliv@def
2335       \fi
2336       \let\unichar\HyPsd@unichar
2337     }%
2338   }%
2339   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2340   \edef\HyPsd@UTFviii@ccxliv@def{%
2341     \noexpand\UTFviii@four@octets\string ^f4%
2342   }%

```

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

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

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

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

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

$$(5)$$

```

2343 \def\HyPsd@UTFviii@two#1#2{%
2344   \expandafter\HyPsd@UTFviii@@two
2345   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2346   \number'#1\expandafter| %
2347   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2348   \number'#2 \@nil
2349 }%
2350 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2351   \expandafter\8%
2352   \number\dimexpr #1-48\expandafter\relax
2353   \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2354   \number\dimexpr #3-8*%

```

```

2355 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2356 \number\numexpr #4-8*#3\relax
2357 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2358 \def\HyPsd@UTFviii@three#1#2#3{%
2359 \expandafter\HyPsd@UTFviii@@three
2360 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2361 \number'#1\expandafter|
2362 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
2363 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
2364 \number'#2\expandafter|
2365 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
2366 \number'#3 \@nil
2367 }%
2368 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2369 \expandafter\9%
2370 \number\numexpr #1-56\expandafter\relax
2371 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2372 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2373 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2374 \number\numexpr #6-16\expandafter\relax
2375 \number\numexpr #7-8*#6\relax
2376 }%

```

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 wwzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2377 \def\HyPsd@UTFviii@four#1#2{%
2378 \expandafter\HyPsd@@UTFviii@four\number
2379 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2380 \expandafter|\number
2381 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|
2382 }%
2383 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2384 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2385 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2386 \ifodd#2 %
2387 \number\numexpr(#2-1)/2\relax
2388 \else
2389 \number\numexpr#2/2\relax
2390 \fi

```

```

2391 \number\numexpr\ifodd#2 4+\fi
2392 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2393 \933%
2394 \expandafter\HyPsd@@@UTFviii@four\number
2395 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2396 }%
2397 \def\HyPsd@@@UTFviii@four#1|#2{%
2398 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2399 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2400 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2401 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2402 }%

```

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

```

2403 \def\HyPsd@unichar#1{%
2404 \ifHy@unicode
2405 \ifnum#1>"10FFFF %
2406 \HyPsd@UnicodeReplacementCharacter % illegal
2407 \else
2408 \ifnum#1>"FFFF %

```

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

```

2409 \expandafter\HyPsd@unichar\expandafter{%
2410 \number\numexpr 55296+%
2411 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2412 \relax\relax\relax
2413 }%

```

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

```

2414 \expandafter\HyPsd@unichar\expandafter{%
2415 \number\numexpr#1-9216%
2416 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2417 \relax\relax\relax
2418 }%
2419 \else
2420 \ifnum#1>"7FF %
2421 \9%
2422 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2423 \number
2424 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 }%
2426 \else
2427 \8%
2428 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2429 \fi
2430 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2431 \number
2432 \numexpr#1-256*\number
2433 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2434 }%
2435 \fi
2436 \fi
2437 \else
2438 .% unsupported (Unicode -> PDF Doc Encoding)
2439 \fi
2440 }%
2441 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2442 \def\HyPsd@unichar@first@byte#1{%
2443   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2444   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2445     \number
2446     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2447     \relax\relax\relax
2448   }%
2449 }%
2450 \def\HyPsd@unichar@second@byte#1{%
2451   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2452   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2453     \number
2454     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2455     \relax\relax\relax
2456   }%
2457 }%
2458 \def\HyPsd@unichar@octtwo#1{%
2459   \number\dimexpr.125\dimexpr#1sp\relax\relax
2460   \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2461   \relax\relax\relax
2462 }%
2463 \fi

```

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

```

2464 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2465   \ifx\@gobble#1%
2466   \else
2467     [Please insert \textbackslash PrerenderUnicode%
2468     \textbraceleft#1\textbraceright\space
2469     into preamble]%
2470   \fi
2471 }%

```

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.

```

2472 \def\HyPsd@DieFace#1{%
2473   \ifHy@unicode
2474     \ifnum#1<1 %
2475       \HyPsd@UnicodeReplacementCharacter
2476     \else
2477       \ifnum#1>6 %
2478         \9046\205%
2479         \expandafter\expandafter\expandafter
2480         \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2481       \else
2482         \9046\20\intcalcDec{#1}%
2483       \fi

```

```

2484 \fi
2485 \else
2486 .% Die faces are not part of PDFDocEncoding
2487 \fi
2488 }

```

\HyPsd@DieFaceLarge

```

2489 \def\HyPsd@DieFaceLarge#1{%
2490 \ifnum#1>6 %
2491 \expandafter\ltx@firstoftwo
2492 \else
2493 \expandafter\ltx@secondoftwo
2494 \fi
2495 {%
2496 \9046\205%
2497 \expandafter\expandafter\expandafter
2498 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2499 }{%
2500 \9046\20\IntCalcDec#1!%
2501 }%
2502 }

```

6.6.11 Support for moon phases of package china2e

```

2503 \def\HyPsd@MoonPha#1{%
2504 \ifcase\intcalcNum{#1} %
2505 \HyPsd@UnicodeReplacementCharacter
2506 \or % 1
2507 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2508 \9330\074\9337\032%
2509 \or % 2
2510 \HyPsd@UnicodeReplacementCharacter
2511 \or % 3
2512 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2513 \9330\074\9337\035%
2514 \or % 4
2515 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2516 \9330\074\9337\034%
2517 \else
2518 \HyPsd@UnicodeReplacementCharacter
2519 \fi
2520 }
2521 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2522 \def\HyPsd@ding#1{%
2523 \ifHy@unicode
2524 \ifnum#1<32 %
2525 \HyPsd@UnicodeReplacementCharacter
2526 \else
2527 \ifnum#1>254 %
2528 \HyPsd@UnicodeReplacementCharacter
2529 \else
2530 \ifnum#1<127 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@@ding\intcalcNum{#1}!%

```

```

2533     \else
2534     \ifnum#1>160 %
2535     \expandafter\expandafter\expandafter
2536     \HyPsd@@ding\intcalcNum{#1}!%
2537     \else
2538     \HyPsd@UnicodeReplacementCharacter
2539     \fi
2540     \fi
2541     \fi
2542     \fi
2543     \else
2544     .% Dingbats are not part of PDFDocEncoding
2545     \fi
2546 }

```

\HyPsd@@ding

```

2547 \def\HyPsd@@ding#1!{%
2548 \ltx@ifundefined{HyPsd@ding@#1}{%
2549 \ifnum#1<127 %
2550 \9047%
2551 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2552 \else
2553 \ifnum#1<168 %
2554 \9047\14\IntCalcSub#1!160!%
2555 \else
2556 \ifnum#1>181 %
2557 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2558 \else
2559 % 172..181 -> U+2460..U+2469
2560 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2561 \fi
2562 \fi
2563 \fi
2564 }{%
2565 \csname HyPsd@ding@#1\endcsname
2566 }%
2567 }

2568 \@namedef{HyPsd@ding@32}{\space}
2569 % U+260E BLACK TELEPHONE
2570 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2571 % U+261B BLACK RIGHT POINTING INDEX
2572 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2573 % U+261E WHITE RIGHT POINTING INDEX
2574 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2575 % U+2605 BLACK STAR
2576 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2577 % U+25CF BLACK CIRCLE
2578 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2579 % U+25A0 BLACK SQUARE
2580 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2581 % U+25B2 BLACK UP-POINTING TRIANGLE
2582 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2583 % U+25BC BLACK DOWN-POINTING TRIANGLE
2584 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2585 % U+25C6 BLACK DIAMOND
2586 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2587 % U+25D7 RIGHT HALF BLACK CIRCLE

```

```

2588 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2589 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2590 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2591 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2592 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2593 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2594 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2595 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2596 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2597 \@ifclassloaded{memoir}{%
2598   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2599 }{}

```

7.2 Package subfigure

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

```

2600 \@ifpackageloaded{subfigure}{%
2601   \ltx@ifundefined{sub@label}{%
2602     \Hy@hypertextnamesfalse
2603   }{%
2604     \renewcommand*{\sub@label}[1]{%
2605       \@bsphack
2606       \subfig@oldlabel{#1}%
2607       \if@filesw
2608         \begingroup
2609         \edef\@currentlabstr{%
2610           \expandafter\strip@prefix\meaning\@currentlabelname
2611         }%
2612         \protected@write\@auxout{}{%
2613           \string\newlabel{sub@#1}{%
2614             {\@nameuse{\@thesub\@capttype}}%
2615             {\thepage}%
2616             {%
2617               \expandafter\strip@period\@currentlabstr
2618               \relax.\relax\@@@%
2619             }%
2620             {\@currentHref}%
2621             {}%
2622           }%
2623         }%
2624         \endgroup
2625       \fi
2626       \@esphack
2627     }%
2628     \@ifpackagelater{subfigure}{2002/03/26}{%
2629       \providecommand*{\toclevel@subfigure}{1}%
2630       \providecommand*{\toclevel@subtable}{1}%
2631     }%
2632   }%
2633 }{}

```

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:

```
2634 \ltx@ifundefined{XR@addURL}{%
2635 }{%
```

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.

```
2636 \def\xR@addURL#1{\xR@dURL#1{}{}{}%
2637 \def\xR@dURL#1#2#3#4#5\{%
2638   {#1}{#2}%
2639   \if!#4!%
2640   \else
2641     {#3}{#4}{\xR@URL}%
2642   \fi
2643 }%
2644 }
```

```
2645 \def\Hy@true{true}
2646 \def\Hy@false{false}
```

Providing dummy definitions.

```
2647 \let\literalps@out\@gobble
2648 \newcommand\pdfbookmark[3]{}{}
2649 \def\Acrobatmenu#1#2{\leavevmode#2}
2650 \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

```
2651 \let\HyperRaiseLinkHook\@empty
2652 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2653 \newcount\Hy@SavedSpaceFactor
2654 \def\Hy@SaveSpaceFactor{%
2655   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2656 }
2657 \def\Hy@RestoreSpaceFactor{%
2658   \relax
2659   \ifhmode
2660     \ifnum\Hy@SavedSpaceFactor>\z@
2661       \spacefactor=\Hy@SavedSpaceFactor
2662     \fi
2663   \fi
```

```

2664 }
2665 \def\Hy@SaveSavedSpaceFactor{%
2666 \edef\Hy@RestoreSavedSpaceFactor{%
2667 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2668 }%
2669 }
2670 \def\Hy@raisedlink#1{%
2671 \ifvmode
2672 #1%
2673 \else
2674 \Hy@SaveSpaceFactor
2675 \penalty\@M
2676 \smash{%
2677 \begingroup
2678 \let\HyperRaiseLinkLength\@tempdima
2679 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2680 \HyperRaiseLinkHook
2681 \expandafter\endgroup
2682 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2683 \Hy@RestoreSpaceFactor
2684 #1%
2685 \Hy@SaveSpaceFactor
2686 }%
2687 }%
2688 \Hy@RestoreSpaceFactor
2689 \fi
2690 }

```

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

```

2691 \def\Hy@SaveLastskip{%
2692 \let\Hy@RestoreLastskip\relax
2693 \ifvmode
2694 \ifdim\lastskip=\z@
2695 \let\Hy@RestoreLastskip\nobreak
2696 \else
2697 \begingroup
2698 \skip@=-\lastskip
2699 \edef\x{%
2700 \endgroup
2701 \def\noexpand\Hy@RestoreLastskip{%
2702 \noexpand\ifvmode
2703 \noexpand\nobreak
2704 \vskip\the\skip@
2705 \vskip\the\lastskip\relax
2706 \noexpand\fi
2707 }%
2708 }%
2709 \x
2710 \fi
2711 \else
2712 \ifhmode
2713 \ifdim\lastskip=\z@
2714 \let\Hy@RestoreLastskip\nobreak
2715 \else
2716 \begingroup
2717 \skip@=-\lastskip
2718 \edef\x{%

```

```

2719         \endgroup
2720         \def\noexpand\Hy@RestoreLastskip{%
2721             \noexpand\ifhmode
2722             \noexpand\nobreak
2723             \hskip\the\skip@
2724             \hskip\the\lastskip\relax
2725             \noexpand\fi
2726         }%
2727     }%
2728     \x
2729     \fi
2730     \fi
2731     \fi
2732 }%

```

9 Options

```

2733 \SetupKeyvalOptions{%
2734     family=Hyp,%
2735     prefix=HyOpt%
2736 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2737 \def\IfHyperBooleanExists#1{%
2738     \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2739         \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2740     }%
2741 }

2742 \@namedef{KV@Hyp@stoppeearly@default}{\}

```

`\IfHyperBoolean`

```

2743 \def\IfHyperBoolean#1{%
2744     \IfHyperBooleanExists{#1}{%
2745         \csname ifHy@#1\endcsname
2746         \expandafter\ltx@firstoftwo
2747     \else
2748         \expandafter\ltx@secondoftwo
2749     \fi
2750 } \ltx@secondoftwo
2751 }

```

`\Hy@boolkey`

```

2752 \def\Hy@boolkey#1#2{%
2753     \edef\Hy@tempa{#2}%
2754     \lowercase\expandafter{%
2755         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2756     }%
2757     \ifx\Hy@tempa\@empty
2758         \let\Hy@tempa\Hy@true
2759     \fi
2760     \ifx\Hy@tempa\Hy@true
2761     \else
2762         \ifx\Hy@tempa\Hy@false
2763         \else

```

```

2764 \let\Hy@tempa\relax
2765 \fi
2766 \fi
2767 \ifx\Hy@tempa\relax
2768 \Hy@WarnOptionValue{#2}{#1}{‘true’ or ‘false’}%
2769 \else
2770 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2771 \csname Hy@#1\Hy@tempa\endcsname
2772 \fi
2773 }

```

\Hy@WarnOptionValue

```

2774 \def\Hy@WarnOptionValue#1#2#3{%
2775 \Hy@Warning{%
2776 Unexpected value ‘#1’\MessageBreak
2777 of option ‘#2’ instead of\MessageBreak
2778 #3%
2779 }%
2780 }

```

\Hy@DisableOption

```

2781 \def\Hy@DisableOption#1{%
2782 \ltx@ifundefined{KV@Hyp@#1@default}{%
2783 \define@key{Hyp}{#1}%
2784 }{%
2785 \define@key{Hyp}{#1}[]%
2786 }%
2787 {\Hy@WarnOptionDisabled{#1}}%
2788 }

```

\Hy@WarnOptionDisabled

```

2789 \def\Hy@WarnOptionDisabled#1{%
2790 \Hy@Warning{%
2791 Option ‘#1’ has already been used,\MessageBreak
2792 setting the option has no effect%
2793 }%
2794 }

```

\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.

```

2795 \def\Hy@CheckOptionValue#1#2#3{%
2796 \begingroup
2797 \edef\x{#1}%
2798 \@onelevel@sanitize\x
2799 \let\y=y%
2800 \def\do##1##2{%
2801 \def\z{##1}%
2802 \@onelevel@sanitize\z
2803 \ifx\x\z
2804 \let\y=n%
2805 \let\do\@gobbletwo
2806 \fi
2807 }%
2808 #3%
2809 \ifx\y y%
2810 \def\do##1##2{%

```

```

2811      * '#1'%
2812      \ifx\##2\\\else\space(##2)\fi
2813      \MessageBreak
2814    }%
2815    \Hy@Warning{%
2816      Values of option '#2':\MessageBreak
2817      #3%
2818      * An empty value disables the option.\MessageBreak
2819      Unknown value '\x'%
2820    }%
2821    \fi
2822  \endgroup
2823 }

```

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

```

2824 \def\Hy@DefNameKey#1{%
2825   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2826 }

```

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

```

2827 \def\Hy@@DefNameKey#1#2#3{%
2828   \define@key{Hyp}{#2}{%
2829     \edef#1{##1}%
2830     \ifx#1\@empty
2831     \else
2832       \Hy@CheckOptionValue{##1}{#2}{#3}%
2833     \fi
2834   }%
2835   \let#1\@empty
2836 }

```

`\Hy@UseNameKey`

```

2837 \def\Hy@UseNameKey#1#2{%
2838   \ifx#2\@empty
2839   \else
2840     /#1/#2%
2841   \fi
2842 }

```

9.2 Defining the options

```

2843 \define@key{Hyp}{implicit}[true]{%
2844   \Hy@boolkey{implicit}{#1}%
2845 }
2846 \define@key{Hyp}{draft}[true]{%
2847   \Hy@boolkey{draft}{#1}%
2848 }
2849 \define@key{Hyp}{final}[true]{%
2850   \Hy@boolkey{final}{#1}%
2851 }
2852 \let\KV@Hyp@nolinks\KV@Hyp@draft
2853 \def\Hy@ObsoletePaperOption#1{%

```

```

2854 \Hy@WarningNoLine{%
2855   Option '#1' is no longer used%
2856 }%
2857 \define@key{Hyp}{#1}[true]{}%
2858 }
2859 \def\Hy@temp#1{%
2860   \define@key{Hyp}{#1}[true]{}%
2861   \Hy@ObsoletePaperOption{#1}%
2862 }%
2863 }
2864 \Hy@temp{a4paper}
2865 \Hy@temp{a5paper}
2866 \Hy@temp{b5paper}
2867 \Hy@temp{letterpaper}
2868 \Hy@temp{legalpaper}
2869 \Hy@temp{executivepaper}

2870 \define@key{Hyp}{setpagesize}[true]{}%
2871 \Hy@boolkey{setpagesize}{#1}%
2872 }
2873 \define@key{Hyp}{debug}[true]{}%
2874 \Hy@boolkey{debug}{#1}%
2875 }
2876 \define@key{Hyp}{linktocpage}[true]{}%
2877 \Hy@boolkey{linktocpage}{#1}%
2878 \ifHy@linktocpage
2879   \let\Hy@linktoc\Hy@linktoc@page
2880 \else
2881   \let\Hy@linktoc\Hy@linktoc@section
2882 \fi
2883 }
2884 \chardef\Hy@linktoc@none=0 %
2885 \chardef\Hy@linktoc@section=1 %
2886 \chardef\Hy@linktoc@page=2 %
2887 \chardef\Hy@linktoc@all=3 %
2888 \ifHy@linktocpage
2889   \let\Hy@linktoc\Hy@linktoc@page
2890 \else
2891   \let\Hy@linktoc\Hy@linktoc@section
2892 \fi
2893 \define@key{Hyp}{linktoc}{}%
2894 \@ifundefined{Hy@linktoc@#1}{}%
2895   \Hy@Warning{%
2896     Unexpected value '#1' of\MessageBreak
2897     option 'linktoc' instead of 'none',\MessageBreak
2898     'section', 'page' or 'all'%
2899   }%
2900 }{}%
2901 \expandafter\let\expandafter\Hy@linktoc
2902   \csname Hy@linktoc@#1\endcsname
2903 }%
2904 }
2905 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2906 \let\XR@ext\relax
2907 \define@key{Hyp}{verbose}[true]{}%
2908 \Hy@boolkey{verbose}{#1}%
2909 }
2910 \define@key{Hyp}{typexml}[true]{}%

```

```

2911 \Hy@boolkey{typexml}{#1}%
2912 }

```

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.

```

2913 \define@key{Hyp}{raiselinks}[true]{%
2914 \Hy@boolkey{raiselinks}{#1}%
2915 }

```

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

```

2916 \def\Hy@setbreaklinks#1{%
2917 \csname breaklinks#1\endcsname
2918 }

2919 \def\Hy@breaklinks@unsupported{%
2920 \ifx\Hy@setbreaklinks\@gobble
2921 \ifHy@breaklinks
2922 \Hy@WarningNoLine{%
2923 You have enabled option 'breaklinks'.\MessageBreak
2924 But driver '\Hy@driver.def' does not support this.\MessageBreak
2925 Expect trouble with the link areas of broken links%
2926 }%
2927 \fi
2928 \fi
2929 }

```

```

2930 \define@key{Hyp}{breaklinks}[true]{%
2931 \Hy@boolkey{breaklinks}{#1}%
2932 \let\Hy@setbreaklinks\@gobble
2933 }

```

```

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

```

Determines whether an automatic anchor is put on each page

```

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

```

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.

```

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

```

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

```

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

```

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

```

2946 \define@key{Hyp}{hypertextnames}[true]{%
2947 \Hy@boolkey{hypertextnames}{#1}%
2948 }

```

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

```

2949 \define@key{Hyp}{nesting}[true]{%

```

```

2950 \Hy@boolkey{nesting}{#1}%
2951 }
2952 \define@key{Hyp}{destlabel}[true]{%
2953 \Hy@boolkey{destlabel}{#1}%
2954 }
2955 \define@key{Hyp}{unicode}[true]{%
2956 \Hy@boolkey{unicode}{#1}%
2957 \ifHy@unicode
2958 \def\HyPsd@pdfencoding{unicode}%
2959 \HyPsd@LoadUnicode
2960 \else
2961 \def\HyPsd@pdfencoding{pdfdoc}%
2962 \fi
2963 }
2964 \Hy@AtBeginDocument{%
2965 \ifx\HyPsd@LoadUnicode\relax
2966 \else
2967 \def\HyPsd@LoadUnicode{%
2968 \Hy@Error{%
2969 Unicode support for bookmarks is not available.\MessageBreak
2970 Activate unicode support by using one of the options\MessageBreak
2971 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2972 in the preamble%
2973 } \@ehc
2974 \global\let\HyPsd@LoadUnicode\relax
2975 \global\Hy@unicodetrue
2976 \global\let\Hy@unicodetrue\Hy@unicodetrue
2977 }%
2978 \fi
2979 }
2980 \define@key{Hyp}{pdfencoding}{%
2981 \edef\HyPsd@temp{#1}%
2982 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2983 \let\HyPsd@pdfencoding\HyPsd@temp
2984 \Hy@unicodetrue
2985 \else
2986 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2987 \z@
2988 \else
2989 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2990 \z@
2991 \else
2992 \@ne
2993 \fi
2994 \fi
2995 \let\HyPsd@pdfencoding\HyPsd@temp
2996 \hypersetup{unicode}%
2997 \ifHy@unicode
2998 \def\HyPsd@pdfencoding{#1}%
2999 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3000 \HyPsd@LoadStringEnc
3001 \fi
3002 \else
3003 \Hy@Warning{Cannot switch to unicode bookmarks}%
3004 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3005 \fi
3006 \else

```

```

3007 \@onelevel@sanitize\HyPsd@temp
3008 \Hy@Warning{%
3009   Values of option 'pdfencoding':\MessageBreak
3010   'pdfdoc', 'unicode', 'auto'.\MessageBreak
3011   Ignoring unknown value '\HyPsd@temp'%
3012 }%
3013 \fi
3014 \fi
3015 }
3016 \def\HyPsd@pdfencoding@auto{auto}
3017 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3018 \def\HyPsd@pdfencoding@unicode{unicode}
3019 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3020 \def\HyPsd@LoadStringEnc{%
3021   \RequirePackage{stringenc}[2009/12/15]%
3022   \let\HyPsd@LoadStringEnc\relax
3023 }
3024 \Hy@AtBeginDocument{%
3025   \ifpackageloaded{stringenc}{%
3026     \let\HyPsd@LoadStringEnc\relax
3027   }{%
3028     \def\HyPsd@LoadStringEnc{%
3029       \Hy@WarningNoLine{%
3030         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
3031         in the preamble or load the package there%
3032       }%
3033     }%
3034   }%
3035 }
3036 \define@key{Hyp}{psdextra}[true]{%
3037   \Hy@boolkey{psdextra}{#1}%
3038   \HyPsd@LoadExtra
3039 }
3040 \def\hypersetup{\kvsetkeys{Hyp}}
3041 \newif\ifHy@setpdfversion
3042 \define@key{Hyp}{pdfversion}{%
3043   \ifundefined{Hy@pdfversion@#1}{%
3044     \PackageWarning{hyperref}{%
3045       Unsupported PDF version '#1'.\MessageBreak
3046       Valid values: 1.2 until 1.9%
3047     }%
3048   }{%
3049     \Hy@setpdfversiontrue
3050     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3051   }%
3052 }
3053 \@namedef{Hy@pdfversion@1.2}{2}%
3054 \@namedef{Hy@pdfversion@1.3}{3}%
3055 \@namedef{Hy@pdfversion@1.4}{4}%
3056 \@namedef{Hy@pdfversion@1.5}{5}%
3057 \@namedef{Hy@pdfversion@1.6}{6}%
3058 \@namedef{Hy@pdfversion@1.7}{7}%
3059 \@namedef{Hy@pdfversion@1.8}{8}%
3060 \@namedef{Hy@pdfversion@1.9}{9}%
3061 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```
3062 \newif\ifHy@DviMode
3063 \let\Hy@DviErrMsg\ltx@empty
3064 \ifpdf
3065   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3066 \else
3067   \ifxetex
3068     \def\Hy@DviErrMsg{XeTeX is running}%
3069   \else
3070     \ifvtex
3071       \ifvtexdvi
3072         \Hy@DviModetrue
3073       \else
3074         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3075       \fi
3076     \else
3077       \Hy@DviModetrue
3078     \fi
3079   \fi
3080 \fi
3081 \def\HyOpt@CheckDvi#1{%
3082   \ifHy@DviMode
3083     \expandafter\ltx@firstofone
3084   \else
3085     \Hy@Error{%
3086       Wrong DVI mode driver option ‘#1’,\MessageBreak
3087       because \Hy@DviErrMsg
3088     }\@ehc
3089     \expandafter\ltx@gobble
3090   \fi
3091 }

3092 \DeclareVoidOption{tex4ht}{%
3093   \Hy@texhttrue
3094   \kvsetkeys{Hyp}{colorlinks=true}%
3095   \def\BeforeTeXIVht{\RequirePackage{color}}}%
3096 \def\Hy@driver{htex4ht}%
3097 \def\MaybeStopEarly{%
3098   \Hy@Message{Stopped early}%
3099   \Hy@AtBeginDocument{%
3100     \PDF@FinishDoc
3101     \gdef\PDF@FinishDoc{}%
3102   }%
3103   \endinput
3104 }%
3105 }

3106 \DeclareVoidOption{pdftex}{%
3107   \ifpdf
3108     \def\Hy@driver{hpdftex}%
3109     \PassOptionsToPackage{pdftex}{color}%
3110   \else
3111     \Hy@Error{%
3112       Wrong driver option ‘pdftex’,\MessageBreak
3113       because pdfTeX in PDF mode is not detected%
3114     }\@ehc
3115   \fi
3116 }
```

```

3117 \DeclareVoidOption{luatex}{%
3118   \ifpdf
3119     \ifx\pdfextension\@undefined
3120       \def\Hy@driver{hpdfTeX}%
3121       \PassOptionsToPackage{pdfTeX}{color}%
3122     \else
3123       \def\Hy@driver{hluatex}%
3124       \PassOptionsToPackage{luatex}{color}%
3125     \fi
3126   \else
3127     \Hy@Error{%
3128       Wrong driver option 'luatex',\MessageBreak
3129       because luaTeX in PDF mode is not detected%
3130     }\@ehc
3131   \fi
3132 }
3133 \DeclareVoidOption{nativepdf}{%
3134   \HyOpt@CheckDvi{nativepdf}{%
3135     \def\Hy@driver{hdvips}%
3136     \PassOptionsToPackage{dvips}{color}%
3137   }%
3138 }
3139 \DeclareVoidOption{dvipdfm}{%
3140   \HyOpt@CheckDvi{dvipdfm}{%
3141     \def\Hy@driver{hdvipdfm}%
3142   }%
3143 }
3144 \DeclareVoidOption{dvipdfmx}{%
3145   \HyOpt@CheckDvi{dvipdfmx}{%
3146     \def\Hy@driver{hdvipdfm}%
3147     \PassOptionsToPackage{dvipdfmx}{color}%
3148   }%
3149 }
3150 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3151   \expandafter\ifx\csname if#1\expandafter\endcsname
3152     \csname iftrue\endcsname
3153   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3154 \else
3155   \chardef\SpecialDvipdfmxOutlineOpen\z@
3156 \fi
3157 }
3158 \DeclareVoidOption{xetex}{%
3159   \ifxetex
3160     \def\Hy@driver{hxetex}%
3161   \else
3162     \Hy@Error{%
3163       Wrong driver option 'xetex',\MessageBreak
3164       because XeTeX is not detected%
3165     }\@ehc
3166   \fi
3167 }
3168 \DeclareVoidOption{pdfmark}{%
3169   \HyOpt@CheckDvi{pdfmark}{%
3170     \def\Hy@driver{hdvips}%
3171   }%
3172 }
3173 \DeclareVoidOption{dvips}{%

```

```

3174 \HyOpt@CheckDvi{dvips}{%
3175   \def\Hy@driver{hdvips}%
3176   \PassOptionsToPackage{dvips}{color}%
3177 }%
3178 }
3179 \DeclareVoidOption{hypertex}{%
3180   \HyOpt@CheckDvi{hypertex}{%
3181     \def\Hy@driver{hypertex}%
3182   }%
3183 }
3184 \let\Hy@MaybeStopNow\relax
3185 \DeclareVoidOption{vtex}{%
3186   \ifvtex
3187     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3188     \def\Hy@driver{hvtex}%
3189   \else
3190     \ifnum\OpMode=10\relax
3191     \def\Hy@driver{hvtexhtm}%
3192     \def\MaybeStopEarly{%
3193       \Hy@Message{Stopped early}%
3194       \Hy@AtBeginDocument{%
3195         \PDF@FinishDoc
3196         \gdef\PDF@FinishDoc{}%
3197       }%
3198     \endinput
3199   }%
3200   \else
3201     \Hy@Error{%
3202       Wrong driver option 'vtex',\MessageBreak
3203       because of wrong OpMode (\the\OpMode)%
3204     }\@ehc
3205   \fi
3206 \fi
3207 \else
3208   \Hy@Error{%
3209     Wrong driver option 'vtex',\MessageBreak
3210     because VTeX is not running%
3211   }\@ehc
3212 \fi
3213 }
3214 \DeclareVoidOption{vtexpdfmark}{%
3215   \ifvtex
3216     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3217     \def\Hy@driver{hvtexmrk}%
3218   \else
3219     \Hy@Error{%
3220       Wrong driver option 'vtexpdfmark',\MessageBreak
3221       because of wrong OpMode (\the\OpMode)%
3222     }\@ehc
3223   \fi
3224   \else
3225     \Hy@Error{%
3226       Wrong driver option 'vtexpdfmark',\MessageBreak
3227       because VTeX is not running%
3228     }\@ehc
3229   \fi
3230 }

```

```

3231 \DeclareVoidOption{dviwindo}{%
3232   \HyOpt@CheckDvi{dviwindo}{%
3233     \def\Hy@driver{hdviwind}%
3234     \kvsetkeys{Hyp}{colorlinks}%
3235     \PassOptionsToPackage{dviwindo}{color}%
3236   }%
3237 }
3238 \DeclareVoidOption{dvipsone}{%
3239   \HyOpt@CheckDvi{dvipsone}{%
3240     \def\Hy@driver{hdvipson}%
3241     \PassOptionsToPackage{dvipsone}{color}%
3242   }%
3243 }
3244 \DeclareVoidOption{textures}{%
3245   \HyOpt@CheckDvi{textures}{%
3246     \def\Hy@driver{htexture}%
3247   }%
3248 }
3249 \DeclareVoidOption{latex2html}{%
3250   \HyOpt@CheckDvi{latex2html}{%
3251     \Hy@AtBeginDocument{\@@latextohtmlX}%
3252   }%
3253 }

```

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

```

3254 \DeclareVoidOption{ps2pdf}{%
3255   \HyOpt@CheckDvi{ps2pdf}{%
3256     \def\Hy@driver{hdvips}%
3257     \PassOptionsToPackage{dvips}{color}%
3258   }%
3259 }
3260 \let\HyOpt@DriverFallback\ltx@empty
3261 \define@key{Hyp}{driverfallback}{%
3262   \ifHy@DviMode
3263     \def\HyOpt@DriverFallback{#1}%
3264     \Hy@Match\HyOpt@DriverFallback{}{%
3265       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3266       latex2html|tex4ht)$%
3267     }{}{%
3268       \Hy@Warning{%
3269         Invalid driver '#1' for option\MessageBreak
3270         'driverfallback'%
3271       }%
3272       \let\HyOpt@DriverFallback\ltx@empty
3273     }%
3274   \fi
3275 }
3276 \let\HyOpt@CustomDriver\ltx@empty
3277 \define@key{Hyp}{customdriver}{%
3278   \IfFileExists{#1.def}{%
3279     \def\HyOpt@CustomDriver{#1}%
3280   }{%
3281     \Hy@Warning{%
3282       Missing driver file '#1.def',\MessageBreak
3283       ignoring custom driver%
3284     }%
3285   }%

```

3286 }

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.

```
3287 \define@key{Hyp}{hyperfigures}[true]{%
3288   \Hy@boolkey{hyperfigures}{#1}%
3289 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
3290 \define@key{Hyp}{hyperfootnotes}[true]{%
3291   \Hy@boolkey{hyperfootnotes}{#1}%
3292 }
```

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

```
3293 \def\back@none{none}
3294 \def\back@section{section}
3295 \def\back@page{page}
3296 \def\back@slide{slide}
3297 \define@key{Hyp}{backref}[section]{%
3298   \lowercase{\def\Hy@tempa{#1}}%
3299   \ifx\Hy@tempa\@empty
3300     \let\Hy@tempa\back@section
3301   \fi
3302   \ifx\Hy@tempa\Hy@false
3303     \let\Hy@tempa\back@none
3304   \fi
3305   \ifx\Hy@tempa\back@slide
3306     \let\Hy@tempa\back@section
3307   \fi
3308   \ifx\Hy@tempa\back@page
3309     \PassOptionsToPackage{hyperpageref}{backref}%
3310     \Hy@backreftrue
3311   \else
3312     \ifx\Hy@tempa\back@section
3313       \PassOptionsToPackage{hyperref}{backref}%
3314       \Hy@backreftrue
3315     \else
3316       \ifx\Hy@tempa\back@none
3317         \Hy@backreffalse
3318       \else
3319         \Hy@WarnOptionValue{#1}{backref}{%
3320           'section', 'slide', 'page', 'none', \MessageBreak
3321           or 'false'}%
3322       \fi
3323     \fi
3324   \fi
3325 }
3326 \define@key{Hyp}{pagebackref}[true]{%
3327   \edef\Hy@tempa{#1}%
3328   \lowercase\expandafter{%
3329     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3330   }%
3331   \ifx\Hy@tempa\@empty
3332     \let\Hy@tempa\Hy@true
3333   \fi
3334   \ifx\Hy@tempa\Hy@true
```

```

3335 \PassOptionsToPackage{hyperpageref}{backref}%
3336 \Hy@backreftrue
3337 \else
3338 \ifx\Hy@tempa\Hy@false
3339 \Hy@backreffalse
3340 \else
3341 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
3342 \fi
3343 \fi
3344 }

```

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

```

3345 \define@key{Hyp}{hyperindex}[true]{%
3346 \Hy@boolkey{hyperindex}{#1}%
3347 }

```

Configuration of encap char.

```

3348 \define@key{Hyp}{encap}[|]{%
3349 \def\HyInd@EncapChar{#1}%
3350 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3351 \def\HyLang@afrikaans{%
3352 \def\equationautorefname{Vergelyking}%
3353 \def\footnoteautorefname{Voetnota}%
3354 \def\itemautorefname{Item}%
3355 \def\figureautorefname{Figuur}%
3356 \def\tableautorefname{Tabel}%
3357 \def\partautorefname{Deel}%
3358 \def\appendixautorefname{Bylae}%
3359 \def\chapterautorefname{Hoofstuk}%
3360 \def\sectionautorefname{Afdeling}%
3361 \def\subsectionautorefname{Subafdeling}%
3362 \def\subsubsectionautorefname{Subsubafdeling}%
3363 \def\paragraphautorefname{Paragraaf}%
3364 \def\subparagraphautorefname{Subparagraaf}%
3365 \def\FancyVerbLineautorefname{Lyn}%
3366 \def\theoremautorefname{Teorema}%
3367 \def\pageautorefname{Bladsy}%
3368 }
3369 \def\HyLang@english{%
3370 \def\equationautorefname{Equation}%
3371 \def\footnoteautorefname{footnote}%
3372 \def\itemautorefname{item}%
3373 \def\figureautorefname{Figure}%
3374 \def\tableautorefname{Table}%
3375 \def\partautorefname{Part}%
3376 \def\appendixautorefname{Appendix}%
3377 \def\chapterautorefname{chapter}%
3378 \def\sectionautorefname{section}%
3379 \def\subsectionautorefname{subsection}%
3380 \def\subsubsectionautorefname{subsubsection}%
3381 \def\paragraphautorefname{paragraph}%
3382 \def\subparagraphautorefname{subparagraph}%

```

```

3383 \def\FancyVerbLineautorefname{line}%
3384 \def\theoremautorefname{Theorem}%
3385 \def\pageautorefname{page}%
3386 }
3387 \def\HyLang@french{%
3388 \def\equationautorefname{'Equation}%
3389 \def\footnoteautorefname{note}%
3390 \def\itemautorefname{item}%
3391 \def\figureautorefname{Figure}%
3392 \def\tableautorefname{Tableau}%
3393 \def\partautorefname{Partie}%
3394 \def\appendixautorefname{Appendice}%
3395 \def\chapterautorefname{chapitre}%
3396 \def\sectionautorefname{section}%
3397 \def\subsectionautorefname{sous-section}%
3398 \def\subsubsectionautorefname{sous-sous-section}%
3399 \def\paragraphautorefname{paragraphe}%
3400 \def\subparagraphautorefname{sous-paragraphe}%
3401 \def\FancyVerbLineautorefname{ligne}%
3402 \def\theoremautorefname{Th\'eor\`eme}%
3403 \def\pageautorefname{page}%
3404 }
3405 \def\HyLang@german{%
3406 \def\equationautorefname{Gleichung}%
3407 \def\footnoteautorefname{Fu\ss note}%
3408 \def\itemautorefname{Punkt}%
3409 \def\figureautorefname{Abbildung}%
3410 \def\tableautorefname{Tabelle}%
3411 \def\partautorefname{Teil}%
3412 \def\appendixautorefname{Anhang}%
3413 \def\chapterautorefname{Kapitel}%
3414 \def\sectionautorefname{Abschnitt}%
3415 \def\subsectionautorefname{Unterabschnitt}%
3416 \def\subsubsectionautorefname{Unterunterabschnitt}%
3417 \def\paragraphautorefname{Absatz}%
3418 \def\subparagraphautorefname{Unterabsatz}%
3419 \def\FancyVerbLineautorefname{Zeile}%
3420 \def\theoremautorefname{Theorem}%
3421 \def\pageautorefname{Seite}%
3422 }
3423 \def\HyLang@italian{%
3424 \def\equationautorefname{Equazione}%
3425 \def\footnoteautorefname{nota}%
3426 \def\itemautorefname{punto}%
3427 \def\figureautorefname{Figura}%
3428 \def\tableautorefname{Tabella}%
3429 \def\partautorefname{Parte}%
3430 \def\appendixautorefname{Appendice}%
3431 \def\chapterautorefname{Capitolo}%
3432 \def\sectionautorefname{sezione}%
3433 \def\subsectionautorefname{sottosezione}%
3434 \def\subsubsectionautorefname{sottosottosezione}%
3435 \def\paragraphautorefname{paragrafo}%
3436 \def\subparagraphautorefname{sottoparagrafo}%
3437 \def\FancyVerbLineautorefname{linea}%
3438 \def\theoremautorefname{Teorema}%
3439 \def\pageautorefname{Pag.\@}%

```

```

3440 }
3441 \def\HyLang@magyar{%
3442 \def\equationautorefname{Egyenlet}%
3443 \def\footnoteautorefname{l\'abjegyzet}%
3444 \def\itemautorefname{Elem}%
3445 \def\figureautorefname{\`A bra}%
3446 \def\tableautorefname{T\'abl\'azat}%
3447 \def\partautorefname{R\'esz}%
3448 \def\appendixautorefname{F\'uggel\'ek}%
3449 \def\chapterautorefname{fejezet}%
3450 \def\sectionautorefname{szakasz}%
3451 \def\subsectionautorefname{alszakasz}%
3452 \def\subsubsectionautorefname{alalszakasz}%
3453 \def\paragraphautorefname{bekezd\'es}%
3454 \def\subparagraphautorefname{albekezd\'es}%
3455 \def\FancyVerbLineautorefname{sor}%
3456 \def\theoremautorefname{T\'etel}%
3457 \def\pageautorefname{oldal}%
3458 }
3459 \def\HyLang@portuges{%
3460 \def\equationautorefname{Equa\c c\~ao}%
3461 \def\footnoteautorefname{Nota de rodap\'e}%
3462 \def\itemautorefname{Item}%
3463 \def\figureautorefname{Figura}%
3464 \def\tableautorefname{Tabela}%
3465 \def\partautorefname{Parte}%
3466 \def\appendixautorefname{Ap\~endice}%
3467 \def\chapterautorefname{Cap\'itulo}%
3468 \def\sectionautorefname{Se\c c\~ao}%
3469 \def\subsectionautorefname{Subse\c c\~ao}%
3470 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3471 \def\paragraphautorefname{par\'agrafo}%
3472 \def\subparagraphautorefname{subpar\'agrafo}%
3473 \def\FancyVerbLineautorefname{linha}%
3474 \def\theoremautorefname{Teorema}%
3475 \def\pageautorefname{P\'agina}%
3476 }

```

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`.

```

3477 \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`?

```

3478 \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`.

```

3479 % \def\equationautorefname{%
3480 % \cyr\cyrv\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3481 % }%

```

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

```
3482 \def\footnoteautorefname{%
3483   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3484 }%
```

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

```
3485 % \def\footnoteautorefname{%
3486 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3487 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3488 % }%
```

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

```
3489 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3490 % \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 \autorefname{auto}” etc.

```
3491 \def\itemautorefname{\cyr\cyrp.}%
3492 % \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.

```
3493 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3494 \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.

```
3495 \def\partautorefname{\cyr\cyrch.}%
3496 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3497 \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 \autorefname{auto}” etc.

```
3498 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3499 % \def\appendixautorefname{%
3500 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3501 % }%
```

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.

```
3502 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3503 \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.

```
3504 \def\paragraphautorefname{\cyr\cyrp.}%
3505 \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.

```
3506 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3507 % \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.

```
3508 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3509 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3510 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3511 % \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 ...

```
3512 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3513 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3514 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3515 \def\pageautorefname{\cyr\cyrs.}%
3516 }
```

```
3517 \def\HyLang@spanish{%
3518 \def\equationautorefname{Ecuaci\'on}%
3519 \def\footnoteautorefname{Nota a pie de p\'agina}%
3520 \def\itemautorefname{Elemento}%
3521 \def\figureautorefname{Figura}%
3522 \def\tableautorefname{Tabla}%
3523 \def\partautorefname{Parte}%
3524 \def\appendixautorefname{Ap\'endice}%
3525 \def\chapterautorefname{Cap\'itulo}%
3526 \def\sectionautorefname{Secci\'on}%
3527 \def\subsectionautorefname{Subsecci\'on}%
3528 \def\subsubsectionautorefname{Subsubsecci\'on}%
3529 \def\paragraphautorefname{P\'arrafo}%
3530 \def\subparagraphautorefname{Subp\'arrafo}%
3531 \def\FancyVerbLineautorefname{L\'inea}%
3532 \def\theoremautorefname{Teorema}%
3533 \def\pageautorefname{P\'agina}%
3534 }
```

```
3535 \def\HyLang@catalan{%
3536 \def\equationautorefname{Equaci\'o}%
3537 \def\footnoteautorefname{Nota al peu de p\'agina}%
3538 \def\itemautorefname{Element}%
3539 \def\figureautorefname{Figura}%
3540 \def\tableautorefname{Taula}%
3541 \def\partautorefname{Part}%
```

```

3542 \def\appendixautorefname{Ap\`endix}%
3543 \def\chapterautorefname{Cap\`itol}%
3544 \def\sectionautorefname{Secci\`o}%
3545 \def\subsectionautorefname{Subsecci\`o}%
3546 \def\subsubsectionautorefname{Subsubsecci\`o}%
3547 \def\paragraphautorefname{Par\`agraf}%
3548 \def\subparagraphautorefname{Subpar\`agraf}%
3549 \def\FancyVerbLineautorefname{L\`inia}%
3550 \def\theoremautorefname{Teorema}%
3551 \def\pageautorefname{P\`agina}%
3552 }

3553 \def\HyLang@vietnamese{%
3554   \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3555   \def\footnoteautorefname{Ch\`u th\`ich}%
3556   \def\itemautorefname{m\`d{u}c}%
3557   \def\figureautorefname{H\`inh}%
3558   \def\tableautorefname{B\`h{a}ng}%
3559   \def\partautorefname{Ph\`acircumflex{}n}%
3560   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3561   \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3562   \def\sectionautorefname{m\`d{u}c}%
3563   \def\subsectionautorefname{m\`d{u}c}%
3564   \def\subsubsectionautorefname{m\`d{u}c}%
3565   \def\paragraphautorefname{\dj{}o\`d{a}n}%
3566   \def\subparagraphautorefname{\dj{}o\`d{a}n}%
3567   \def\FancyVerbLineautorefname{d\`ong}%
3568   \def\theoremautorefname{D\`J{}d\`i nh l\`y}%
3569   \def\pageautorefname{Trang}%
3570 }

```

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

```

3571 \def\HyLang@addto#1#2{%
3572   #2%
3573   \@temptokena{#2}%
3574   \ifx#1\relax
3575     \let#1\@empty
3576   \fi
3577   \ifx#1\@undefined
3578     \edef#1{\the\@temptokena}%
3579   \else
3580     \toks@\expandafter{#1}%
3581     \edef#1{\the\toks@\the\@temptokena}%
3582   \fi
3583   \@temptokena{}\toks@\@temptokena
3584 }

3585 \def\HyLang@DeclareLang#1#2#3{%
3586   \@ifpackagewith{babel}{#1}{%
3587     \expandafter\HyLang@addto
3588       \csname extras#1\expandafter\endcsname
3589       \csname HyLang@#2\endcsname
3590     \begingroup
3591       \edef\x{\endgroup
3592         #3%
3593       }%
3594     \x
3595     \@namedef{HyLang@#1@done}{}%

```

```

3596 }{}%
3597 \begingroup
3598 \edef\x##1##2{%
3599 \noexpand\ifx##2\relax
3600 \errmessage{No definitions for language #2' found!}%
3601 \noexpand\fi
3602 \endgroup
3603 \noexpand\define@key{Hyp}{#1}[]{}%
3604 \noexpand\@ifundefined{HyLang@#1@done}{}%
3605 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3606 #3%
3607 \noexpand\@namedef{HyLang@#1@done}{}%
3608 }{}%
3609 }%
3610 }%
3611 \expandafter\x\csname extras#1\expandafter\endcsname
3612 \csname HyLang@#2\endcsname
3613 }
3614 \HyLang@DeclareLang{english}{english}{}
3615 \HyLang@DeclareLang{UKenglish}{english}{}
3616 \HyLang@DeclareLang{british}{english}{}
3617 \HyLang@DeclareLang{USenglish}{english}{}
3618 \HyLang@DeclareLang{american}{english}{}
3619 \HyLang@DeclareLang{german}{german}{}
3620 \HyLang@DeclareLang{austrian}{german}{}
3621 \HyLang@DeclareLang{ngerman}{german}{}
3622 \HyLang@DeclareLang{naustrian}{german}{}
3623 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3624 \HyLang@DeclareLang{brazil}{portuges}{}
3625 \HyLang@DeclareLang{brazilian}{portuges}{}
3626 \HyLang@DeclareLang{portuguese}{portuges}{}
3627 \HyLang@DeclareLang{spanish}{spanish}{}
3628 \HyLang@DeclareLang{catalan}{catalan}{}
3629 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3630 \HyLang@DeclareLang{french}{french}{}
3631 \HyLang@DeclareLang{frenchb}{french}{}
3632 \HyLang@DeclareLang{francais}{french}{}
3633 \HyLang@DeclareLang{acadian}{french}{}
3634 \HyLang@DeclareLang{canadien}{french}{}
3635 \HyLang@DeclareLang{italian}{italian}{}
3636 \HyLang@DeclareLang{magyar}{magyar}{}
3637 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3638 \DeclareVoidOption{vietnamese}{}%
3639 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3640 \Hy@AtEndOfPackage{%
3641 \@ifundefined{T@PU}{}{}%
3642 \input{puvnc.def}%
3643 }%
3644 }%
3645 }
3646 \DeclareVoidOption{vietnam}{}%
3647 \HyLang@addto\extravietnam\HyLang@vietnamese
3648 \Hy@AtEndOfPackage{%
3649 \@ifundefined{T@PU}{}{}%
3650 \input{puvnc.def}%
3651 }%

```

```

3652 }%
3653 }

```

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

```

3654 \DeclareVoidOption{arabic}{%
3655   \Hy@AtEndOfPackage{%
3656     \@ifundefined{T@PU}{-}{%
3657       \input{puarenc.def}%
3658     }%
3659   }%
3660 }

```

13 Options to change appearance of links

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

```

3661 \define@key{Hyp}{colorlinks}[true]{%
3662   \Hy@boolkey{colorlinks}{#1}%
3663 }
3664 \DeclareVoidOption{hidelinks}{%
3665   \Hy@colorlinksfalse
3666   \Hy@ocgcolorlinksfalse
3667   \Hy@frenchlinksfalse
3668   \def\Hy@colorlink##1{\begingroup}%
3669   \def\Hy@endcolorlink{\endgroup}%
3670   \def\@pdfborder{0 0 0}%
3671   \let\@pdfborderstyle\ltx@empty
3672 }
3673 \define@key{Hyp}{ocgcolorlinks}[true]{%
3674   \Hy@boolkey{ocgcolorlinks}{#1}%
3675 }
3676 \Hy@AtBeginDocument{%
3677   \begingroup
3678   \@ifundefined{OBJ@OCG@view}{%
3679     \ifHy@ocgcolorlinks
3680       \Hy@Warning{%
3681         Driver does not support ‘ocgcolorlinks’,\MessageBreak
3682         using ‘colorlinks’ instead%
3683       }%
3684     \fi
3685   }{}%
3686   \endgroup
3687 }
3688 \define@key{Hyp}{frenchlinks}[true]{%
3689   \Hy@boolkey{frenchlinks}{#1}%
3690 }

```

14 Bookmarking

```

3691 \begingroup\expandafter\expandafter\expandafter\endgroup
3692 \expandafter\ifx\csname chapter\endcsname\relax
3693   \def\toclevel@part{0}%
3694 \else
3695   \def\toclevel@part{-1}%
3696 \fi
3697 \def\toclevel@chapter{0}
3698 \def\toclevel@section{1}

```

```

3699 \def\toclevel@subsection{2}
3700 \def\toclevel@subsubsection{3}
3701 \def\toclevel@paragraph{4}
3702 \def\toclevel@subparagraph{5}
3703 \def\toclevel@figure{0}
3704 \def\toclevel@table{0}
3705 \@ifpackageloaded{listings}{%
3706   \providecommand*\theHlstlisting{\thelstlisting}%
3707   \providecommand*\toclevel@lstlisting{0}%
3708 }{}
3709 \@ifpackageloaded{listing}{%
3710   \providecommand*\theHlisting{\thelisting}%
3711   \providecommand*\toclevel@listing{0}%
3712 }{}

3713 \define@key{Hyp}{bookmarks}[true]{%
3714   \Hy@boolkey{bookmarks}{#1}%
3715 }

3716 \define@key{Hyp}{bookmarksopen}[true]{%
3717   \Hy@boolkey{bookmarksopen}{#1}%
3718 }

```

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.

```

3719 \let\Hy@bookmarksdepth\c@tocdepth
3720 \define@key{Hyp}{bookmarksdepth}[]{%
3721   \begingroup
3722     \edef\x{#1}%
3723     \ifx\x\empty
3724       \global\let\Hy@bookmarksdepth\c@tocdepth
3725     \else
3726       \@ifundefined{toclevel@\x}{%
3727         \@onelevel@sanitize\x
3728         \edef\y{\expandafter\@car\x\@nil}%
3729         \ifcase 0\expandafter\ifx\y-1\fi
3730           \expandafter\ifnum\expandafter'\y>47 %
3731             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3732           \Hy@Warning{Unknown document division name (\x)}%
3733         \else
3734           \setbox\z@=\hbox{%
3735             \count@=\x
3736             \xdef\Hy@bookmarksdepth{\the\count@}%
3737           }%
3738         \fi
3739       }{%
3740         \setbox\z@=\hbox{%
3741           \count@=\csname toclevel@\x\endcsname
3742           \xdef\Hy@bookmarksdepth{\the\count@}%
3743         }%

```

```

3744 }%
3745 \fi
3746 \endgroup
3747 }

```

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

```

3748 \define@key{Hyp}{bookmarksopenlevel}{%
3749 \def\@bookmarksopenlevel{#1}%
3750 }
3751 \def\@bookmarksopenlevel{\maxdimen}
3752 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3753 \define@key{Hyp}{bookmarkstype}{%
3754 \def\Hy@bookmarkstype{#1}%
3755 }
3756 \def\Hy@bookmarkstype{toc}

```

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

```

3757 \define@key{Hyp}{bookmarksnumbered}[true]{%
3758 \Hy@boolkey{bookmarksnumbered}{#1}%
3759 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3760 \define@key{Hyp}{CJKbookmarks}[true]{%
3761 \Hy@boolkey{CJKbookmarks}{#1}%
3762 }

3763 \def\Hy@temp#1{%
3764 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3765 }
3766 \def\Hy@@temp#1#2#3{%
3767 \define@key{Hyp}{#2color}{%
3768 \HyColor@HyperrefColor{##1}#1%
3769 }%
3770 \def#1{#3}%
3771 }
3772 \Hy@temp{link}{red}
3773 \Hy@temp{anchor}{black}
3774 \Hy@temp{cite}{green}
3775 \Hy@temp{file}{cyan}
3776 \Hy@temp{url}{magenta}
3777 \Hy@temp{menu}{red}
3778 \Hy@temp{run}{\@filecolor}
3779 \define@key{Hyp}{pagecolor}{%
3780 \Hy@WarningPageColor
3781 }
3782 \def\Hy@WarningPageColor{%
3783 \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3784 \global\let\Hy@WarningPageColor\relax
3785 }
3786 \define@key{Hyp}{allcolors}{%
3787 \HyColor@HyperrefColor{#1}\@linkcolor
3788 \HyColor@HyperrefColor{#1}\@anchorcolor
3789 \HyColor@HyperrefColor{#1}\@citecolor
3790 \HyColor@HyperrefColor{#1}\@filecolor
3791 \HyColor@HyperrefColor{#1}\@urlcolor
3792 \HyColor@HyperrefColor{#1}\@menucolor
3793 \HyColor@HyperrefColor{#1}\@runcolor
3794 }

```

```

3795 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3796 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3797 \let\@baseurl\@empty
3798 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3799 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3800 \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.

```

3801 \let\pdfpagetransition\relax
3802 \define@key{Hyp}{pdfpagetransition}{%
3803   \def\pdfpagetransition{#1}%
3804 }

```

`\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.

```

3805 \let\pdfpageduration\relax
3806 \define@key{Hyp}{pdfpageduration}{%
3807   \def\pdfpageduration{#1}%
3808   \Hy@Match\pdfpageduration{}{%
3809     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3810   }{}{%
3811     \Hy@Warning{%
3812       Invalid value '\pdfpageduration'\MessageBreak
3813       of option 'pdfpageduration'\MessageBreak
3814       is replaced by an empty value%
3815     }%
3816     \let\pdfpageduration\ltx@empty
3817   }%
3818 }

```

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.

```

3819 \newif\ifHy@useHidKey
3820 \Hy@useHidKeyfalse
3821 \define@key{Hyp}{pdfpagehidden}[true]{%
3822   \Hy@boolkey{pdfpagehidden}{#1}%
3823   \ifHy@pdfpagehidden
3824     \global\Hy@useHidKeytrue
3825   \fi
3826 }

```

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).

```

3827 \def\Hy@ColorList{cite,file,link,menu,run,url}
3828 \@for\Hy@temp:=\Hy@ColorList\do{%
3829   \edef\Hy@temp{%
3830     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3831       \noexpand\HyColor@HyperrefBorderColor
3832       {##1}%
3833       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3834       {hyperref}%
3835       {\Hy@temp bordercolor}%
3836     }%
3837   }%
3838   \Hy@temp
3839 }
3840 \define@key{Hyp}{pagebordercolor}{%
3841   \Hy@WarningPageBorderColor
3842 }
3843 \def\Hy@WarningPageBorderColor{%
3844   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3845   \global\let\Hy@WarningPageBorderColor\relax
3846 }
3847 \define@key{Hyp}{allbordercolors}{%
3848   \def\Hy@temp###1##2{%
3849     \HyColor@HyperrefBorderColor{##1}##1{hyperref}{##2bordercolor}%
3850   }%
3851   \Hy@temp\@citebordercolor{cite}%
3852   \Hy@temp\@filebordercolor{file}%
3853   \Hy@temp\@linkbordercolor{link}%
3854   \Hy@temp\@menubordercolor{menu}%
3855   \Hy@temp\@runbordercolor{run}%
3856   \Hy@temp\@urlbordercolor{url}%
3857 }

3858 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{##1}}
3859 \Hy@DefNameKey{pdfhighlight}{%
3860   \do{/I}{Invert}%
3861   \do{/N}{None}%
3862   \do{/O}{Outline}%
3863   \do{/P}{Push}%
3864 }
3865 \define@key{Hyp}{pdfborder}{%
3866   \let\Hy@temp\@pdfborder
3867   \def\@pdfborder{##1}%
3868   \Hy@Match\@pdfborder{}{%
3869     ~\HyPat@NonNegativeReal/ %
3870     \HyPat@NonNegativeReal/ %
3871     \HyPat@NonNegativeReal/%
3872     ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3873   }{}{%
3874     \Hy@Warning{%
3875       Invalid value '\@pdfborder'\MessageBreak
3876       for option 'pdfborder'.\MessageBreak
3877       Option setting is ignored%
3878     }%
3879     \let\@pdfborder\Hy@temp
3880   }%
3881 }
3882 \define@key{Hyp}{pdfborderstyle}{%
3883   \let\Hy@temp\@pdfborderstyle

```

```

3884 \def\@pdfborderstyle{#1}%
3885 \Hy@Match\@pdfborderstyle{}{%
3886   ~%
3887   ( */Type */Border%
3888   | */W +\HyPat@NonNegativeReal/%
3889   | */S */[SDBIU]%
3890   | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?}%
3891   )* *$%
3892 }{}{%
3893   \Hy@Warning{%
3894     Invalid value '\@pdfborderstyle'\MessageBreak
3895     for option 'pdfborderstyle'.\MessageBreak
3896     Option setting is ignored%
3897   }%
3898   \let\@pdfborderstyle\Hy@temp
3899 }%
3900 }
3901 \def\Hy@setpdfborder{%
3902   \ifx\@pdfborder\@empty
3903   \else
3904     /Border[\@pdfborder]%
3905   \fi
3906   \ifx\@pdfborderstyle\@empty
3907   \else
3908     /BS<<\@pdfborderstyle>>%
3909   \fi
3910 }
3911 \Hy@DefNameKey{pdfpagemode}{%
3912   \do{UseNone}{}%
3913   \do{UseOutlines}{}%
3914   \do{UseThumbs}{}%
3915   \do{FullScreen}{}%
3916   \do{UseOC}{PDF 1.5}%
3917   \do{UseAttachments}{PDF 1.6}%
3918 }
3919 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3920   \do{UseNone}{}%
3921   \do{UseOutlines}{}%
3922   \do{UseThumbs}{}%
3923   \do{FullScreen}{}%
3924   \do{UseOC}{PDF 1.5}%
3925   \do{UseAttachments}{PDF 1.6}%
3926 }
3927 \Hy@DefNameKey{pdfdirection}{%
3928   \do{L2R}{Left to right}%
3929   \do{R2L}{Right to left}%
3930 }
3931 \Hy@DefNameKey{pdfviewarea}{%
3932   \do{MediaBox}{}%
3933   \do{CropBox}{}%
3934   \do{BleedBox}{}%
3935   \do{TrimBox}{}%
3936   \do{ArtBox}{}%
3937 }
3938 \Hy@DefNameKey{pdfviewclip}{%
3939   \do{MediaBox}{}%
3940   \do{CropBox}{}%

```

```

3941 \do{BleedBox}{}%
3942 \do{TrimBox}{}%
3943 \do{ArtBox}{}%
3944 }
3945 \Hy@DefNameKey{pdfprintarea}{%
3946 \do{MediaBox}{}%
3947 \do{CropBox}{}%
3948 \do{BleedBox}{}%
3949 \do{TrimBox}{}%
3950 \do{ArtBox}{}%
3951 }
3952 \Hy@DefNameKey{pdfprintclip}{%
3953 \do{MediaBox}{}%
3954 \do{CropBox}{}%
3955 \do{BleedBox}{}%
3956 \do{TrimBox}{}%
3957 \do{ArtBox}{}%
3958 }
3959 \Hy@DefNameKey{pdfprintscaling}{%
3960 \do{AppDefault}{}%
3961 \do{None}{}%
3962 }
3963 \Hy@DefNameKey{pdfduplex}{%
3964 \do{Simplex}{}%
3965 \do{DuplexFlipShortEdge}{}%
3966 \do{DuplexFlipLongEdge}{}%
3967 }
3968 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3969 \do{true}{}%
3970 \do{false}{}%
3971 }
3972 \define@key{Hyp}{pdfprintpagerange}{%
3973 \def\@pdfprintpagerange{#1}%
3974 }
3975 \Hy@DefNameKey{pdfnumcopies}{%
3976 \do{2}{two copies}%
3977 \do{3}{three copies}%
3978 \do{4}{four copies}%
3979 \do{5}{five copies}%
3980 }
3981 \define@key{Hyp}{pdfusetitle}[true]{%
3982 \Hy@boolkey{pdfusetitle}{#1}%
3983 }
3984 \def\HyXeTeX@CheckUnicode{%
3985 \ifxetex
3986 \ifHy@unicode
3987 \else
3988 \Hy@WarningNoLine{%
3989 XeTeX driver only supports unicode.\MessageBreak
3990 Enabling option 'unicode'%
3991 }%
3992 \kvsetkeys{Hyp}{unicode}%
3993 \fi
3994 \else
3995 \let\HyXeTeX@CheckUnicode\relax
3996 \fi
3997 }

```

```

3998 \def\HyPsd@PrerenderUnicode#1{%
3999   \begingroup
4000   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4001     \else
4002     \sbox0{%
4003       \let\GenericInfo\@gobbletwo
4004       \let\GenericWarning\@gobbletwo
4005       \let\GenericError\@gobblefour
4006       \PrerenderUnicode{#1}%
4007     }%
4008   \fi
4009 \endgroup
4010 }
4011 \define@key{Hyp}{pdftitle}{%
4012   \HyXeTeX@CheckUnicode
4013   \HyPsd@XeTeXBigCharstrue
4014   \HyPsd@PrerenderUnicode{#1}%
4015   \pdfstringdef\@pdftitle{#1}%
4016 }
4017 \define@key{Hyp}{pdfauthor}{%
4018   \HyXeTeX@CheckUnicode
4019   \HyPsd@XeTeXBigCharstrue
4020   \HyPsd@PrerenderUnicode{#1}%
4021   \pdfstringdef\@pdfauthor{#1}%
4022 }
4023 \define@key{Hyp}{pdfproducer}{%
4024   \HyXeTeX@CheckUnicode
4025   \HyPsd@XeTeXBigCharstrue
4026   \HyPsd@PrerenderUnicode{#1}%
4027   \pdfstringdef\@pdfproducer{#1}%
4028   \ifxetex
4029     \Hy@Warning{%
4030       pdfproducer: %
4031       xdvipdfmx will use its own setting\MessageBreak
4032       instead of the value given%
4033     }%
4034   \else
4035     \def\Hy@temp{hdvipdfm}%
4036     \ifx\Hy@driver\Hy@temp
4037       \Hy@Warning{%
4038         pdfproducer: %
4039         dvipdfm(x) will use its own setting\MessageBreak
4040         instead of the value given%
4041       }%
4042     \fi
4043   \fi
4044 }
4045 \define@key{Hyp}{pdfcreator}{%
4046   \HyXeTeX@CheckUnicode
4047   \HyPsd@XeTeXBigCharstrue
4048   \HyPsd@PrerenderUnicode{#1}%
4049   \pdfstringdef\@pdfcreator{#1}%
4050 }
4051 \define@key{Hyp}{pdfcreationdate}{%
4052   \begingroup
4053   \Hy@unicodedefalse
4054   \pdfstringdef\@pdfcreationdate{#1}%

```

```

4055 \endgroup
4056 }
4057 \define@key{Hyp}{pdfmoddate}{%
4058 \begingroup
4059 \Hy@unicodetrue
4060 \pdfstringdef\@pdfmoddate{#1}%
4061 \endgroup
4062 }
4063 \define@key{Hyp}{pdfsubject}{%
4064 \HyXeTeX@CheckUnicode
4065 \HyPsd@XeTeXBigCharstrue
4066 \HyPsd@PrerenderUnicode{#1}%
4067 \pdfstringdef\@pdfsubject{#1}%
4068 }
4069 \define@key{Hyp}{pdfkeywords}{%
4070 \HyXeTeX@CheckUnicode
4071 \HyPsd@XeTeXBigCharstrue
4072 \HyPsd@PrerenderUnicode{#1}%
4073 \pdfstringdef\@pdfkeywords{#1}%
4074 }
4075 \define@key{Hyp}{pdftrapped}{%
4076 \lowercase{\edef\Hy@temp{#1}}%
4077 \ifx\Hy@temp\HyInfo@trapped@true
4078 \def\@pdftrapped{True}%
4079 \else
4080 \ifx\Hy@temp\HyInfo@trapped@false
4081 \def\@pdftrapped{False}%
4082 \else
4083 \ifx\Hy@temp\HyInfo@trapped@unknown
4084 \def\@pdftrapped{Unknown}%
4085 \else
4086 \ifx\Hy@temp\@empty
4087 \else
4088 \Hy@Warning{%
4089   Unsupported value '#1'\MessageBreak
4090   for option 'pdftrapped'%
4091 }%
4092 \fi
4093 \def\@pdftrapped{}%
4094 \fi
4095 \fi
4096 \fi
4097 }
4098 \def\HyInfo@trapped@true{true}
4099 \def\HyInfo@trapped@false{false}
4100 \def\HyInfo@trapped@unknown{unknown}
4101 \def\HyInfo@TrappedUnsupported{%
4102 \ifx\@pdftrapped\@empty
4103 \else
4104 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4105 \gdef\HyInfo@TrappedUnsupported{}%
4106 \fi
4107 }
4108 \define@key{Hyp}{pdfinfo}{%
4109 \kvsetkeys{pdfinfo}{#1}%
4110 }
4111 \def\Hy@temp#1{%

```

```

4112 \lowercase{\Hy@temp@A{#1}}{#1}%
4113 }
4114 \def\Hy@temp@A#1#2{%
4115 \define@key{pdfinfo}{#2}{%
4116 \hypersetup{pdf#1={##1}}}%
4117 }%
4118 }
4119 \Hy@temp{Title}
4120 \Hy@temp{Author}
4121 \Hy@temp{Keywords}
4122 \Hy@temp{Subject}
4123 \Hy@temp{Creator}
4124 \Hy@temp{Producer}
4125 \Hy@temp{CreationDate}
4126 \Hy@temp{ModDate}
4127 \Hy@temp{Trapped}
4128 \newif\ifHyInfo@AddonUnsupported
4129 \kv@set@family@handler{pdfinfo}{%
4130 \HyInfo@AddonHandler{#1}{#2}%
4131 }
4132 \let\HyInfo@do\relax
4133 \def\HyInfo@AddonHandler#1#2{%
4134 \ifx\kv@value\relax
4135 \Hy@Warning{%
4136 Option 'pdfinfo': ignoring key '\kv@key' without value%
4137 }%
4138 \else
4139 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4140 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4141 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4142 \ifHyInfo@AddonUnsupported
4143 \Hy@Warning{%
4144 This driver does not support additional\MessageBreak
4145 information entries, therefore\MessageBreak
4146 '\kv@key' is ignored%
4147 }%
4148 \else
4149 \def\HyInfo@tmp##1{%
4150 \kv@define@key{pdfinfo}{##1}{%
4151 \HyXeTeX@CheckUnicode
4152 \HyPsd@XeTeXBigCharstrue
4153 \HyPsd@PrerenderUnicode{####1}%
4154 \pdfstringdef\HyInfo@Value{####1}%
4155 \global\expandafter
4156 \let\csname HyInfo@Value@##1\endcsname
4157 \HyInfo@Value
4158 }%
4159 }%
4160 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4161 \global\expandafter
4162 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4163 \csname KV@pdfinfo@\HyInfo@Key\endcsname
4164 \xdef\HyInfo@AddonList{%
4165 \HyInfo@AddonList
4166 \HyInfo@do{\HyInfo@Key}%
4167 }%
4168 \kv@parse@normalized{%

```

```

4169     \HyInfo@Key={#2}%
4170   }{%
4171     \kv@processor@default{pdfinfo}%
4172   }%
4173   \fi
4174 \else
4175   \kv@parse@normalized{%
4176     \HyInfo@Key={#2}%
4177   }{%
4178     \kv@processor@default{pdfinfo}%
4179   }%
4180   \fi
4181 \fi
4182 }
4183 \def\HyInfo@GenerateAddons{%
4184   \ifHyInfo@AddonUnsupported
4185     \def\HyInfo@Addons{}%
4186   \else
4187     \begingroup
4188       \toks@{}%
4189       \def\HyInfo@do##1{%
4190         \EdefEscapeName\HyInfo@Key{##1}%
4191         \edef\x{%
4192           \toks@{%
4193             \the\toks@
4194             /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4195           }%
4196         }%
4197         \x
4198       }%
4199       \HyInfo@AddonList
4200       \edef\x{\endgroup
4201         \def\noexpand\HyInfo@Addons{\the\toks@}%
4202       }%
4203       \x
4204     \fi
4205   }
4206   \global\let\HyInfo@AddonList\ltx@empty
4207   \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4208   \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
4209   \let\setpdflinkmargin\@gobble
4210   \def\calculate@pdfview#1 #2\{\{%
4211     \def\@pdfview{#1}%
4212     \ifx\#2\%
4213       \def\@pdfviewparams{-32768}%
4214     \else
4215       \def\@pdfviewparams{ #2}%
4216     \fi
4217   }
4218   \begingroup\expandafter\expandafter\expandafter\endgroup
4219   \expandafter\ifx\csname numexpr\endcsname\relax
4220     \def\Hy@number#1{%
4221       \expandafter\@firstofone\expandafter{\number#1}%
4222     }%
4223   \else
4224     \def\Hy@number#1{%
4225       \the\numexpr#1\relax

```

```

4226 }%
4227 \fi
4228 \define@key{Hyp}{pdfstartpage}{%
4229   \ifx\|#1\%
4230     \let\@pdfstartpage\ltx@empty
4231   \else
4232     \edef\@pdfstartpage{\Hy@number{#1}}%
4233   \fi
4234 }%
4235 \define@key{Hyp}{pdfstartview}{%
4236   \ifx\|#1\%
4237     \let\@pdfstartview\ltx@empty
4238   \else
4239     \hypercalcbpdef\@pdfstartview{/#1}%
4240   \fi
4241 }
4242 \def\HyPat@NonNegativeReal/{%
4243   \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4244 }
4245 \define@key{Hyp}{pdfremotestartview}{%
4246   \ifx\|#1\%
4247     \def\@pdfremotestartview{/Fit}%
4248   \else
4249     \hypercalcbpdef\@pdfremotestartview{#1}%
4250     \edef\@pdfremotestartview{\@pdfremotestartview}%
4251     \Hy@Match\@pdfremotestartview{%
4252       ~ (XYZ -?(null|\HyPat@NonNegativeReal/) %
4253         -?(null|\HyPat@NonNegativeReal/) %
4254         (null|\HyPat@NonNegativeReal/)|%
4255       Fit(|B| %
4256         (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
4257         R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
4258         \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
4259       )$%
4260     }%
4261     \Hy@Warning{%
4262       Invalid value '\@pdfremotestartview'\MessageBreak
4263       of 'pdfremotestartview'\MessageBreak
4264       is replaced by 'Fit'%
4265     }%
4266     \let\@pdfremotestartview\@empty
4267   }%
4268   \ifx\@pdfremotestartview\@empty
4269     \def\@pdfremotestartview{/Fit}%
4270   \else
4271     \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4272   \fi
4273 \fi
4274 }
4275 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4276 \define@key{Hyp}{pdftoolbar}[true]{%
4277   \Hy@boolkey{pdftoolbar}{#1}%
4278 }
4279 \define@key{Hyp}{pdfmenubar}[true]{%
4280   \Hy@boolkey{pdfmenubar}{#1}%
4281 }
4282 \define@key{Hyp}{pdfwindowui}[true]{%

```

```

4283 \Hy@boolkey{pdfwindowui}{#1}%
4284 }
4285 \define@key{Hyp}{pdffitwindow}[true]{%
4286 \Hy@boolkey{pdffitwindow}{#1}%
4287 }
4288 \define@key{Hyp}{pdfcenterwindow}[true]{%
4289 \Hy@boolkey{pdfcenterwindow}{#1}%
4290 }
4291 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4292 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4293 }
4294 \define@key{Hyp}{pdfa}[true]{%
4295 \Hy@boolkey{pdfa}{#1}%
4296 }
4297 \define@key{Hyp}{pdfnewwindow}[true]{%
4298 \def\Hy@temp{#1}%
4299 \ifx\Hy@temp\@empty
4300 \Hy@pdfnewwindowsetfalse
4301 \else
4302 \Hy@pdfnewwindowsettrue
4303 \Hy@boolkey{pdfnewwindow}{#1}%
4304 \fi
4305 }
4306 \def\Hy@SetNewWindow{%
4307 \ifHy@pdfnewwindowset
4308 /NewWindow %
4309 \ifHy@pdfnewwindow true\else false\fi
4310 \fi
4311 }
4312 \Hy@DefNameKey{pdfpagelayout}{%
4313 \do{SinglePage}{}%
4314 \do{OneColumn}{}%
4315 \do{TwoColumnLeft}{}%
4316 \do{TwoColumnRight}{}%
4317 \do{TwoPageLeft}{PDF 1.5}%
4318 \do{TwoPageRight}{PDF 1.5}%
4319 }
4320 \define@key{Hyp}{pdflang}{%
4321 \edef\@pdflang{#1}%
4322 \def\Hy@temp{\relax}%
4323 \ifx\@pdflang\Hy@temp
4324 \let\@pdflang\relax
4325 \fi
4326 \ifx\@pdflang\relax
4327 \else
4328 \ifx\@pdflang\ltx@empty
4329 \else

```

Test according to ABNF of RFC 3066.

```

4330 \Hy@Match\@pdflang{icase}{%
4331 ~%
4332 [a-z]{1,8}%
4333 (-[a-z0-9]{1,8})*%
4334 $%
4335 }{%

```

Test according to ABNF of RFC 5646.

```

4336 \Hy@Match\@pdflang{icase}{%

```

```

4337 ~%
4338 (%)
4339 % langtag
4340   (% language
4341     [a-z]{2,3}%
4342     ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4343     |[a-z]{4}% reserved for future use
4344     |[a-z]{5,8}% registered language subtag
4345   )%
4346   (-[a-z]{4})?% script
4347   (-([a-z]{2}|[0-9]{3}))?% region
4348   (-([a-z]{5,8}|[0-9][a-z0-9]{3}))% variant
4349   (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4350   (-x(-[a-z0-9]{1,8})+)% privateuse
4351 % privateuse
4352   |x-([a-z0-9]{1,8})+%
4353 % grandfathered/irregular
4354   |en-GB-oed%
4355   |i-(ami|bnn|default|enochian|hak|klinton|lux|
4356     mingo|navajo|pwn|tao|tay|tsu)%
4357   |sgn-(BE-FR|BE-NL|CH-DE)%
4358 % grandfathered/regular
4359   |art-lojban%
4360   |cel-gaulish%
4361   |no-(bok|nyn)%
4362   |zh-(guoyu|hakka|min|min-nan|xiang)%
4363 )%
4364 $%
4365 }{%

```

Test for unique extensions.

```

4366 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4367 \Hy@Match\@pdflang{icase}{~x-}{}%
4368 % remove privateuse
4369 \edef\Hy@temp{-\@pdflang}%
4370 \Hy@Match\Hy@temp{icase}{{%
4371   ~%
4372   (%)
4373   (-[a-wyz0-9]|-[a-z0-9]{2,8})%
4374   )%
4375   -x-%
4376   }{%
4377     \edef\Hy@temp{%
4378       \expandafter\strip@prefix\pdfastmatch1%
4379     }%
4380   }{%
4381     \Hy@Match\Hy@temp{icase}{{%
4382       (-[a-wyz0-9]-).*\ltx@backslashchar1%
4383     }{%
4384       \Hy@Warning{%
4385         Invalid language identifier '#1'\MessageBreak
4386         for option 'pdfang', because it violates\MessageBreak
4387         well-formedness defined in RFC 4646\MessageBreak
4388         by duplicate singleton subtags%
4389       }%
4390       \let\@pdfang\relax
4391     }{%
4392     }%

```

4393 }{}%

User-assigned country codes are forbidden in language tags (RFC 3066).

```
4394        \ifx\@pdflang\relax
4395        \else
4396        \Hy@Match\@pdflang{icase}{%
4397        ~%
4398        [a-zA-Z]{2}-%
4399        (%
4400        aa|AA|%
4401        [qQ][m-zA-Z]|%
4402        [xX][a-zA-Z]|%
4403        zz|ZZ%
4404        )%
4405        (-|%)%
4406        }%
4407        \Hy@Warning{%
4408        Invalid language identifier '#1'\MessageBreak
4409        for option 'pdflang' because of invalid country code%
4410        \MessageBreak
4411        in second subtag (RFC 3066)%
4412        }%
4413        \let\@pdflang\relax
4414        }{}%
4415        \fi
4416        }%
4417        \Hy@Warning{%
4418        Invalid language identifier '#1'\MessageBreak
4419        for option 'pdflang', because it violates\MessageBreak
4420        well-formedness defined in RFC 5646%
4421        }%
4422        \let\@pdflang\relax
4423        }%
4424        }%
4425        \Hy@Warning{%
4426        Invalid language identifier '#1'\MessageBreak
4427        for option 'pdflang' (RFC 3066)%
4428        }%
4429        \let\@pdflang\relax
4430        }%
4431        \fi
4432        \fi
4433     }
4434     \define@key{Hyp}{pdfpagelabels}[true]{%
4435        \Hy@boolkey{pdfpagelabels}{#1}%
4436     }
4437     \define@key{Hyp}{pdfescapeform}[true]{%
4438        \Hy@boolkey{pdfescapeform}{#1}%
4439     }
```

Default values:

```
4440 \def\@linkbordercolor{1 0 0}
4441 \def\@urlbordercolor{0 1 1}
4442 \def\@menubordercolor{1 0 0}
4443 \def\@filebordercolor{0 .5 .5}
4444 \def\@runbordercolor{0 .7 .7}
4445 \def\@citebordercolor{0 1 0}
4446 \def\@pdfhighlight{/I}
```

```

4447 \let\@pdftitle\ltx@empty
4448 \let\@pdfauthor\ltx@empty
4449 \let\@pdfproducer\relax
4450 \def\@pdfcreator{LaTeX with hyperref package}
4451 \let\@pdfcreationdate\ltx@empty
4452 \let\@pdfmoddate\ltx@empty
4453 \let\@pdfsubject\ltx@empty
4454 \let\@pdfkeywords\ltx@empty
4455 \let\@pdftrapped\ltx@empty
4456 \let\@pdfpagescrop\ltx@empty
4457 \def\@pdfstartview{/Fit}
4458 \def\@pdfremotestartview{/Fit}
4459 \def\@pdfstartpage{1}
4460 \let\@pdfprintpagerange\ltx@empty
4461 \let\@pdflang\relax
4462 \let\PDF@SetupDoc\@empty
4463 \let\PDF@FinishDoc\@empty
4464 \let\phantomsection\@empty
4465 \let\special@paper\@empty
4466 \def\HyperDestNameFilter#1{#1}
4467 \Hy@AtBeginDocument{%
4468   \begingroup
4469     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4470     \dimen@=\x\relax
4471     \ifdim\dimen@>\z@
4472       \else
4473         \dimen@=11in\relax
4474         \Hy@WarningNoLine{%
4475           Height of page (\expandafter\string\x) %
4476           is invalid (\the\x),\MessageBreak
4477           using 11in%
4478         }%
4479       \fi
4480       \dimen@=0.99626401\dimen@
4481       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4482     \endgroup
4483 }
4484 \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.

```

4485 \let\hyper@normalise\ExecuteOptions
4486 \let\ExecuteOptions\hypersetup
4487 \Hy@RestoreCatcodes
4488 \InputIfFileExists{hyperref.cfg}{-}{-}
4489 \Hy@SetCatcodes
4490 \let\ExecuteOptions\hyper@normalise
4491 \ifx\Hy@MaybeStopNow\relax
4492 \else
4493   \Hy@stoppedearlytrue
4494   \expandafter\Hy@MaybeStopNow
4495 \fi
4496 \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.

```

4497 \SetupKeyvalOptions{family=Hyp}

```

```

4498 \DeclareLocalOptions{%
4499   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4500 }

    Add option tex4ht if package tex4ht is loaded.
4501 \@ifpackagewith{hyperref}{tex4ht}{%
4502 }{%
4503   \@ifpackageloaded{tex4ht}{%
4504     \PassOptionsToPackage{tex4ht}{hyperref}%
4505   }{%
4506     \ltx@ifundefined{HCode}{%
4507     }{%
4508       \begingroup
4509       \def\Hy@pkg{tex4ht}%
4510       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4511         \def\Hy@param{#2#3}%
4512         \ifx\Hy@param\ltx@empty
4513           \expandafter\ltx@gobble
4514         \else
4515           \def\Hy@param{#3}%
4516           \ifx\Hy@param\Hy@pkg
4517             \PassOptionsToPackage{#2}{tex4ht}%
4518             \expandafter\expandafter\expandafter\@gobble
4519           \else
4520             \expandafter\expandafter\expandafter\ltx@firstofone
4521           \fi
4522         \fi
4523         {\Hy@temp@A#4\Hy@NIL}%
4524       }%
4525       \expandafter
4526       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4527     \endgroup
4528     \PassOptionsToPackage{tex4ht}{hyperref}%
4529   }%
4530 }%
4531 }

4532 \let\ReadBookmarks\relax
4533 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4534 \def\Hy@xspace@end{}
4535 \ltx@ifundefined{xspaceaddexceptions}{%
4536   \Hy@AtBeginDocument{%
4537     \ltx@ifundefined{xspaceaddexceptions}{%
4538     }{%
4539       \def\Hy@xspace@end{%
4540         \ltx@gobble{end for xspace}%
4541       }%
4542       \xspaceaddexceptions{%
4543         \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4544       }%
4545     }%
4546   }%
4547 }{%
4548   \def\Hy@xspace@end{%

```

```

4549 \ltx@gobble{end for xspace}%
4550 }%
4551 \xspaceaddections{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4552 }

```

15.2 Option draft

```

4553 \Hy@AtBeginDocument{%
4554 \ifHy@draft
4555 \let\hyper@@anchor\@gobble
4556 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4557 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4558 \def\hyper@anchorend{\Hy@xspace@end}%
4559 \let\hyper@linkstart\@gobbletwo
4560 \def\hyper@linkend{\Hy@xspace@end}%
4561 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4562 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4563 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4564 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4565 \let\PDF@SetupDoc\@empty
4566 \let\PDF@FinishDoc\@empty
4567 \let\@fifthoffive\@secondoftwo
4568 \let\@secondoffive\@secondoftwo
4569 \let\ReadBookmarks\relax
4570 \let\WriteBookmarks\relax
4571 \Hy@WarningNoLine{Draft mode on}%
4572 \fi
4573 \Hy@DisableOption{draft}%
4574 \Hy@DisableOption{nolinks}%
4575 \Hy@DisableOption{final}%
4576 }

```

15.3 PDF/A

```

4577 \Hy@DisableOption{pdfa}
4578 \ifHy@pdfa
4579 \kvsetkeys{Hyp}{pdfversion=1.4}%
4580 \Hy@DisableOption{pdfversion}%
4581 \def\Hy@Acrobatmenu#1#2{%
4582 \leavevmode
4583 \begingroup
4584 \edef\x{#1}%
4585 \@onelevel@sanitize\x
4586 \ifx\x\Hy@NextPage
4587 \let\y=Y%
4588 \else
4589 \ifx\x\Hy@PrevPage
4590 \let\y=Y%
4591 \else
4592 \ifx\x\Hy@FirstPage
4593 \let\y=Y%
4594 \else
4595 \ifx\x\Hy@LastPage
4596 \let\y=Y%
4597 \else
4598 \let\y=N%
4599 \fi
4600 \fi
4601 \fi

```

```

4602 \fi
4603 \expandafter\endgroup
4604 \ifx\y Y%
4605 \else
4606 \Hy@Error{%
4607 PDF/A: Named action ‘#1’ is not permitted%
4608 }\@ehc
4609 {#2}%
4610 \expandafter\@gobble
4611 \fi
4612 }%
4613 \def\Hy@temp#1{%
4614 \expandafter\def\csname Hy@#1\endcsname{#1}%
4615 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4616 }%
4617 \Hy@temp{NextPage}%
4618 \Hy@temp{PrevPage}%
4619 \Hy@temp{FirstPage}%
4620 \Hy@temp{LastPage}%
4621 \else
4622 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4623 \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.

```

4624 \Hy@nextfalse
4625 \ltx@ifundefined{spanish@sh@”@sel}{\Hy@nexttrue}
4626 \ltx@ifundefined{galician@sh@”@sel}{\Hy@nexttrue}
4627 \ltx@ifundefined{estonian@sh@”@sel}{\Hy@nexttrue}
4628 \ifHy@next
4629 \let\texttilde\~%
4630 \fi

4631 \def\Hy@wrapper@babel#1#2{%
4632 \begingroup
4633 \Hy@safe@activetrue
4634 \set@display@protect
4635 \edef\x{#2}%
4636 \@onelevel@sanitize\x
4637 \toks@{#1}%
4638 \edef\x{\endgroup\the\toks@{x}}%
4639 \x
4640 }
4641 \def\Hy@WrapperDef#1{%
4642 \begingroup
4643 \escapechar=\m@ne
4644 \xdef\Hy@gtemp{%
4645 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4646 }%
4647 \endgroup
4648 \edef#1{%
4649 \noexpand\Hy@wrapper@babel
4650 \expandafter\noexpand\Hy@gtemp
4651 }%
4652 \expandafter\def\Hy@gtemp

```

```

4653 }
4654 \ifHy@hyperfigures
4655 \Hy@Info{Hyper figures ON}%
4656 \else
4657 \Hy@Info{Hyper figures OFF}%
4658 \fi
4659 \ifHy@nesting
4660 \Hy@Info{Link nesting ON}%
4661 \else
4662 \Hy@Info{Link nesting OFF}%
4663 \fi
4664 \ifHy@hyperindex
4665 \Hy@Info{Hyper index ON}%
4666 \else
4667 \Hy@Info{Hyper index OFF}%
4668 \fi
4669 \ifHy@plainpages
4670 \Hy@Info{Plain pages ON}%
4671 \else
4672 \Hy@Info{Plain pages OFF}%
4673 \fi
4674 \ifHy@backref
4675 \Hy@Info{Backreferencing ON}%
4676 \else
4677 \Hy@Info{Backreferencing OFF}%
4678 \fi
4679 \ifHy@typexml
4680 \Hy@AtEndOfPackage{%
4681 \RequirePackage{color}%
4682 \RequirePackage{nameref}[2012/07/28]%
4683 }%
4684 \fi
4685 \Hy@DisableOption{typexml}
4686 \ifHy@implicit
4687 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4688 \else
4689 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4690 \def\MaybeStopEarly{%
4691 \Hy@Message{Stopped early}%
4692 \Hy@AtBeginDocument{%
4693 \PDF@FinishDoc
4694 \gdef\PDF@FinishDoc{}}%
4695 }%
4696 \endinput
4697 }%
4698 \Hy@AtBeginDocument{%
4699 \let\autoref\ref
4700 \let\autopageref\pageref
4701 \ifx\@pdfpagemode\@empty
4702 \gdef\@pdfpagemode{UseNone}%
4703 \fi
4704 \global\Hy@backreffalse
4705 }%
4706 \Hy@AtEndOfPackage{%
4707 \global\let\ReadBookmarks\relax
4708 \global\let\WriteBookmarks\relax
4709 }%

```

```

4710 \fi
4711 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4712 \Hy@AtEndOfPackage{%
4713   \@ifpackageloaded{tex4ht}{%
4714     \def\Hy@driver{htex4ht}%
4715     \Hy@texhttrue
4716   }{}%

```

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.

```

4717   \ifx\Hy@driver\@empty
4718   \else
4719     \def\Hy@temp{hpdfTeX}%
4720     \ifpdf
4721       \ifx\Hy@driver\Hy@temp
4722       \else
4723         \Hy@WarningNoLine{%
4724           Wrong driver ‘\Hy@driver.def’;\MessageBreak
4725           pdfTeX is running in PDF mode.\MessageBreak
4726           Forcing driver ‘\Hy@temp.def’%
4727         }%
4728         \let\Hy@driver\Hy@temp
4729       \fi
4730     \else
4731       \ifx\Hy@driver\Hy@temp
4732       \Hy@WarningNoLine{%
4733         Wrong driver ‘\Hy@driver.def’;\MessageBreak
4734         pdfTeX is not running in PDF mode.\MessageBreak
4735         Using default driver%
4736       }%
4737       \let\Hy@driver\@empty
4738     \fi
4739   \fi
4740 \fi
4741 \ifHy@texht
4742 \else
4743   \ifx\Hy@driver\@empty
4744   \else
4745     \def\Hy@temp{hxetex}%
4746     \ifxetex
4747       \ifx\Hy@driver\Hy@temp
4748       \else
4749         \Hy@WarningNoLine{%
4750           Wrong driver ‘\Hy@driver.def’;\MessageBreak
4751           XeTeX is running.\MessageBreak
4752           Forcing driver ‘\Hy@temp.def’ for XeTeX%
4753         }%
4754         \let\Hy@driver\Hy@temp
4755       \fi
4756     \fi
4757   \fi
4758 \fi
4759 \ifx\Hy@driver\@empty
4760 \else
4761   \def\Hy@temp{hvtexhtm}%

```

```

4762 \ifvtexhtml
4763 \ifx\Hy@driver\Hy@temp
4764 \else
4765 \Hy@WarningNoLine{%
4766 Wrong driver '\Hy@driver.def';\MessageBreak
4767 VTeX is running in HTML mode.\MessageBreak
4768 Forcing driver '\Hy@temp.def'%
4769 }%
4770 \let\Hy@driver\Hy@temp
4771 \fi
4772 \else
4773 \ifx\Hy@driver\Hy@temp
4774 \Hy@WarningNoLine{%
4775 Wrong driver '\Hy@driver.def';\MessageBreak
4776 VTeX is not running in HTML mode.\MessageBreak
4777 Using default driver%
4778 }%
4779 \let\Hy@driver\@empty
4780 \fi
4781 \fi
4782 \fi

```

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

```

4783 \let\HyOpt@DriverType\ltx@empty
4784 \ifx\HyOpt@CustomDriver\ltx@empty
4785 \ifx\Hy@driver\@empty
4786 \def\HyOpt@DriverType{ (autodetected)}%
4787 \providecommand*{\Hy@defaultdriver}{hypertex}%
4788 \ifpdf
4789 \ifx\pdfextension\@undefined
4790 \def\Hy@driver{hpdftex}%
4791 \else
4792 \def\Hy@driver{hluatex}%
4793 \fi
4794 \else
4795 \ifxetex
4796 \def\Hy@driver{hxetex}%
4797 \else
4798 \ifvtexhtml
4799 \def\Hy@driver{hvtexhtm}%
4800 \def\MaybeStopEarly{%
4801 \Hy@Message{Stopped early}%
4802 \Hy@AtBeginDocument{%
4803 \PDF@FinishDoc
4804 \gdef\PDF@FinishDoc{}}%
4805 }%
4806 \endinput
4807 }%
4808 \else
4809 \ifvtexpdf
4810 \def\Hy@driver{hvtex}%
4811 \else
4812 \ifvtexps
4813 \def\Hy@driver{hvtex}%
4814 \else
4815 \ifx\HyOpt@DriverFallback\ltx@empty
4816 \let\Hy@driver\Hy@defaultdriver
4817 \def\HyOpt@DriverType{ (default)}%

```

```

4818         \else
4819         \begingroup
4820         \toks@\expandafter{\HyOpt@DriverFallback}%
4821         \edef\x{\endgroup
4822         \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4823         }%
4824         \x
4825         \ifx\Hy@driver\ltx@empty
4826         \let\Hy@driver\Hy@defaultdriver
4827         \def\HyOpt@DriverType{ (default)}%
4828         \else
4829         \def\HyOpt@DriverType{ (fallback)}%
4830         \fi
4831     \fi
4832 \fi
4833 \fi
4834 \fi
4835 \fi
4836 \fi
4837 \ifx\Hy@driver\Hy@defaultdriver
4838 \def\Hy@temp{hdwind}%
4839 \ifx\Hy@temp\Hy@driver
4840 \kvsetkeys{Hyp}{colorlinks}%
4841 \PassOptionsToPackage{dwindo}{color}%
4842 \fi
4843 \fi
4844 \fi
4845 \else
4846 \def\HyOpt@DriverType{ (custom)}%
4847 \let\Hy@driver\HyOpt@CustomDriver
4848 \fi
4849 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4850 \chardef\Hy@VersionChecked=0 %
4851 \input{\Hy@driver.def}%
4852 \ifcase\Hy@VersionChecked
4853 \Hy@VersionCheck{\Hy@driver.def}%
4854 \fi
4855 \let\@unprocessedoptions\relax
4856 \Hy@RestoreCatcodes
4857 \Hy@DisableOption{tex4ht}%
4858 \Hy@DisableOption{pdftex}%
4859 \Hy@DisableOption{nativepdf}%
4860 \Hy@DisableOption{dvipdfm}%
4861 \Hy@DisableOption{dvipdfmx}%
4862 \Hy@DisableOption{dvipdfmx-outline-open}%
4863 \Hy@DisableOption{pdfmark}%
4864 \Hy@DisableOption{dvips}%
4865 \Hy@DisableOption{hypertex}%
4866 \Hy@DisableOption{vtex}%
4867 \Hy@DisableOption{vtexpdfmark}%
4868 \Hy@DisableOption{dviwindo}%
4869 \Hy@DisableOption{dvipsone}%
4870 \Hy@DisableOption{textures}%
4871 \Hy@DisableOption{latex2html}%
4872 \Hy@DisableOption{ps2pdf}%
4873 \Hy@DisableOption{xetex}%
4874 \Hy@DisableOption{driverfallback}%

```

```

4875 \Hy@DisableOption{customdriver}%
4876 \Hy@DisableOption{pdfversion}%
4877 }

```

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.

```

4878 \newif\ifHy@DvipdfmxOutlineOpen
4879 \ifxetex
4880 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4881 \else
4882 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4883 \Hy@DvipdfmxOutlineOpenttrue
4884 \fi
4885 \fi
4886 \begingroup\expandafter\expandafter\expandafter\endgroup
4887 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4888 \else
4889 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4890 \Hy@DvipdfmxOutlineOpenttrue
4891 \fi
4892 \fi

```

15.4.2 Bookmarks

```

4893 \def\WriteBookmarks{0}
4894 \def\@bookmarkopenstatus#1{%
4895 \ifHy@bookmarksopen

```

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

```

4896 \ifnum#1<\expandafter\@firstofone\expandafter
4897 \{\number\@bookmarksopenlevel\} % explicit space
4898 \else
4899 -%
4900 \fi
4901 \else
4902 -%
4903 \fi
4904 }
4905 \ifHy@bookmarks
4906 \Hy@Info{Bookmarks ON}%
4907 \ifx\@pdfpagemode\@empty
4908 \def\@pdfpagemode{UseOutlines}%
4909 \fi
4910 \else
4911 \let\@bookmarkopenstatus\ltx@gobble
4912 \Hy@Info{Bookmarks OFF}%
4913 \Hy@AtEndOfPackage{%
4914 \global\let\ReadBookmarks\relax
4915 \global\let\WriteBookmarks\relax
4916 }%
4917 \ifx\@pdfpagemode\@empty
4918 \def\@pdfpagemode{UseNone}%
4919 \fi
4920 \fi
4921 \Hy@DisableOption{bookmarks}

```

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

```

4922 \def\Hy@CatcodeWrapper#1{%

```

```

4923 \let\Hy@endWrap\ltx@empty
4924 \def\TMP@EnsureCode##1##2{%
4925   \edef\Hy@endWrap{%
4926     \Hy@endWrap
4927     \catcode##1 \the\catcode##1\relax
4928   }%
4929   \catcode##1 ##2\relax
4930 }%
4931 \TMP@EnsureCode{10}{12}% ^^J
4932 \TMP@EnsureCode{33}{12}% !
4933 \TMP@EnsureCode{34}{12}% "
4934 \TMP@EnsureCode{36}{3}% $ (math)
4935 \TMP@EnsureCode{38}{4}% & (alignment)
4936 \TMP@EnsureCode{39}{12}% '
4937 \TMP@EnsureCode{40}{12}% (
4938 \TMP@EnsureCode{41}{12}% )
4939 \TMP@EnsureCode{42}{12}% *
4940 \TMP@EnsureCode{43}{12}% +
4941 \TMP@EnsureCode{44}{12}% ,
4942 \TMP@EnsureCode{45}{12}% -
4943 \TMP@EnsureCode{46}{12}% .
4944 \TMP@EnsureCode{47}{12}% /
4945 \TMP@EnsureCode{58}{12}% :
4946 \TMP@EnsureCode{59}{12}% ;
4947 \TMP@EnsureCode{60}{12}% <
4948 \TMP@EnsureCode{61}{12}% =
4949 \TMP@EnsureCode{62}{12}% >
4950 \TMP@EnsureCode{63}{12}% ?
4951 \TMP@EnsureCode{91}{12}% [
4952 \TMP@EnsureCode{93}{12}% ]
4953 \TMP@EnsureCode{94}{7}% ^ (superscript)
4954 \TMP@EnsureCode{95}{8}% _ (subscript)
4955 \TMP@EnsureCode{96}{12}% '
4956 \TMP@EnsureCode{124}{12}% |
4957 \TMP@EnsureCode{126}{13}% ~ (active)
4958 #1\relax
4959 \Hy@endWrap
4960 }

```

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

```

4961 \Hy@AtBeginDocument{%
4962   \ifHy@ocgcolorlinks
4963     \kvsetkeys{Hyp}{colorlinks}%
4964     \ifHy@pdfa
4965       \Hy@Warning{%
4966         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4967         using 'colorlinks' instead of 'ocgcolorlinks'%
4968       }%
4969     \Hy@ocgcolorlinksfalse
4970   \fi
4971 \fi
4972 \ifHy@ocgcolorlinks
4973 \else
4974   \Hy@DisableOption{ocgcolorlinks}%
4975 \fi
4976 \ifHy@colorlinks
4977   \def\@pdfborder{0 0 0}%

```

```

4978 \let\@pdfborderstyle\@empty
4979 \ifHy@typexml
4980 \else
4981   \Hy@CatcodeWrapper{%
4982     \RequirePackage{color}%
4983   }%
4984 \fi
4985 \def\Hy@colorlink#1{%
4986   \begingroup
4987   \HyColor@UseColor#1%
4988 }%
4989 \def\Hy@endcolorlink{\endgroup}%
4990 \Hy@Info{Link coloring ON}%
4991 \else
4992   \ifHy@frenchlinks
4993     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4994     \def\Hy@endcolorlink{\endgroup}%
4995     \Hy@Info{French linking ON}%
4996   \else
for grouping consistency:
4997     \def\Hy@colorlink#1{\begingroup}%
4998     \def\Hy@endcolorlink{\endgroup}%
4999     \Hy@Info{Link coloring OFF}%
5000   \fi
5001 \fi
5002 \Hy@DisableOption{colorlinks}%
5003 \Hy@DisableOption{frenchlinks}%
5004 \ifHy@texht
5005   \long\def\@firstoffive#1#2#3#4#5{#1}%
5006   \long\def\@secondoffive#1#2#3#4#5{#2}%
5007   \long\def\@thirdoffive#1#2#3#4#5{#3}%
5008   \long\def\@fourthoffive#1#2#3#4#5{#4}%
5009   \long\def\@fifthoffive#1#2#3#4#5{#5}%
5010   \providecommand*\@safe@activetrue{}%
5011   \providecommand*\@safe@activesfalse{}%
5012   \def\T@ref#1{%
5013     \Hy@safe@activetrue
5014     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5015     \Hy@safe@activesfalse
5016   }%
5017   \def\T@pageref#1{%
5018     \Hy@safe@activetrue
5019     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5020     \Hy@safe@activesfalse
5021   }%
5022 \else
5023   \ifHy@typexml
5024   \else
5025     \Hy@CatcodeWrapper{%
5026       \RequirePackage{nameref}[2012/07/28]%
5027     }%
5028   \fi
5029 \fi
5030 \DeclareRobustCommand\ref{%
5031   \@ifstar\@refstar\T@ref
5032 }%
5033 \DeclareRobustCommand\pageref{%

```

```

5034 \ifstar\@pagerefstar\T@pageref
5035 }%
5036 % \ifclassloaded{memoir}{%
5037 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5038 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5039 % }%
5040 % }\ltx@secondoftwo
5041 % {%
5042 % \DeclareRobustCommand*{\nameref}{%
5043 % \ifstar\@mem@titlerefno link\@mem@titleref
5044 % }%
5045 % }\ltx@secondoftwo
5046 \DeclareRobustCommand*{\nameref}{%
5047 \ifstar\@namerefstar\T@nameref
5048 }%
5049 % }%
5050 }
5051 \Hy@AtBeginDocument{%
5052 \ifHy@texht
5053 \else
5054 \Hy@CatcodeWrapper\ReadBookmarks
5055 \fi
5056 }
5057 \ifHy@backref
5058 \RequirePackage{backref}%
5059 \else
5060 \let\Hy@backout\@gobble
5061 \fi
5062 \Hy@DisableOption{backref}
5063 \Hy@DisableOption{pagebackref}
5064 \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`.

```

5065 \begingroup
5066 \endlinechar=-1 %
5067 \catcode'\^^A=14 %
5068 \catcode'\^^M\active
5069 \catcode'\%\active
5070 \catcode'\#\active
5071 \catcode'\_\active
5072 \catcode'\$\active
5073 \catcode'\&\active
5074 \gdef\hyper@normalise{^^A
5075 \begingroup
5076 \catcode'\^^M\active
5077 \def^^M{ }^^A
5078 \catcode'\%\active
5079 \let%\@percentchar

```

```

5080 \let\%\@percentchar
5081 \catcode'\#\active
5082 \def#{\hyper@hash}^^A
5083 \def\#{\hyper@hash}^^A
5084 \@makeother\&^^A
5085 \edef&{\string&}^^A
5086 \edef\&{\string&}^^A
5087 \edef\textunderscore{\string_}^^A
5088 \let\_ \textunderscore
5089 \catcode'\_ \active
5090 \let\_ \textunderscore
5091 \let~\hyper@tilde
5092 \let\~\hyper@tilde
5093 \let\textasciitilde\hyper@tilde
5094 \let\\\@backslashchar
5095 \edef$\string$}^^A
5096 \Hy@safe@activetrue
5097 \hyper@n@rmalise
5098 }^^A
5099 \catcode'\#=6 ^^A
5100 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5101 \gdef\hyper@n@rmalise#1#2{^^A
5102 \def\Hy@tempa{#2}^^A
5103 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5104 \ltx@ReturnAfterElseFi{^^A
5105 \hyper@@normalise{#1}^^A
5106 }^^A
5107 \else
5108 \ltx@ReturnAfterFi{^^A
5109 \hyper@@normalise{#1}{#2}^^A
5110 }^^A
5111 \fi
5112 }^^A
5113 \gdef\hyper@@normalise#1#2{^^A
5114 \edef\Hy@tempa{^^A
5115 \endgroup
5116 \noexpand#1{\Hy@RemovePercentCr#2%\@nil}^^A
5117 }^^A
5118 \Hy@tempa
5119 }^^A
5120 \gdef\Hy@RemovePercentCr#1%\@nil{^^A
5121 #1^^A
5122 \ifx\limits#2\limits
5123 \else
5124 \ltx@ReturnAfterFi{^^A
5125 \Hy@RemovePercentCr #2\@nil
5126 }^^A
5127 \fi
5128 }^^A
5129 \endgroup
5130 \providecommand*\hyper@chars{%
5131 \let\#\hyper@hash
5132 \let\%\@percentchar
5133 \Hy@safe@activetrue
5134 }

5135 \def\hyperlink#1#2{%
5136 \hyper@@link{}{#1}{#2}%

```

```

5137 }
5138 \def\Hy@VerboseLinkStart#1#2{%
5139   \ifHy@verbose
5140     \begingroup
5141       \Hy@safe@activetrue
5142       \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
5143       \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5144       \xdef\Hy@VerboseGlobalTemp{%
5145         \Hy@VerboseGlobalTemp, %
5146         line \the\inputlineno
5147       }%
5148     \endgroup
5149     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5150     \@onelevel@sanitize\Hy@VerboseLinkInfo
5151   \fi
5152 }
5153 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5154 \def\Hy@VerboseLinkStop{%
5155   \ifHy@verbose
5156     \begingroup
5157       \edef\x{\endgroup
5158         \write\m@ne{%
5159           Package 'hyperref' Info: %
5160           End of reference \Hy@VerboseLinkInfo.%
5161         }%
5162       }%
5163     \x
5164   \fi
5165 }
5166 \def\Hy@VerboseAnchor#1{%
5167   \ifHy@verbose
5168     \begingroup
5169       \Hy@safe@activetrue
5170       \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
5171     \endgroup
5172   \fi
5173 }
5174 \def\Hy@AllowHyphens{%
5175   \relax
5176   \ifhmode
5177     \penalty\@M
5178     \hskip\z@skip
5179   \fi
5180 }
5181 \DeclareRobustCommand*\href{[1][]{%
5182   \begingroup
5183     \setkeys{href}{#1}%
5184     \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5185   }
5186 \def\Hy@href#1{%
5187   \hyper@normalise\href@
5188 }
5189 \begingroup
5190 \catcode'\$=6 %
5191 \catcode'\#=12 %
5192 \gdef\href@\$1{\expandafter\href@split$1##\}%

```

```

5193 \gdef\href@split$1#$$2#$$3\\$4{%
5194 \hyper@@link{$1}{$2}{$3}{$4}%
5195 \endgroup
5196 }%
5197 \endgroup

```

Option ‘page’.

```

5198 \define@key{href}{page}{%
5199 \def\Hy@href@page{#1}%
5200 }
5201 \let\Hy@href@page\@empty
5202 \newcount\c@Hy@tempcnt
5203 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5204 \def\Hy@MakeRemoteAction{%
5205 \ifx\Hy@href@page\@empty
5206 \def\Hy@href@page{0}%
5207 \else
5208 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5209 \ifnum\c@Hy@tempcnt<\@ne
5210 \Hy@Warning{%
5211 Invalid page number (\theHy@tempcnt)\MessageBreak
5212 for remote PDF file.\MessageBreak
5213 Using page 1%
5214 }%
5215 \def\Hy@href@page{0}%
5216 \else
5217 \global\advance\c@Hy@tempcnt\m@ne
5218 \edef\Hy@href@page{\theHy@tempcnt}%
5219 \fi
5220 \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.

```

5221 \ifx\Hy@href@nextactionraw\@empty
5222 \else
5223 \Hy@pdfnewwindowsettrue
5224 \Hy@pdfnewwindowtrue
5225 \fi
5226 }

```

Option ‘pdfremotestartview’.

```

5227 \define@key{href}{pdfremotestartview}{%
5228 \setkeys{Hyp}{pdfremotestartview={#1}}%
5229 }

```

Option ‘pdfnewwindow’.

```

5230 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5231 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5232 \newif\ifHy@href@ismap
5233 \define@key{href}{ismap}[true]{%
5234 \ltx@ifundefined{Hy@href@ismap#1}{%
5235 \Hy@Error{%
5236 Invalid value (#1) for key ‘ismap’.\MessageBreak
5237 Permitted values are ‘true’ or ‘false’.\MessageBreak
5238 Ignoring ‘ismap’%
5239 }\@ehc
5240 }{%

```

```

5241 \csname Hy@href@ismap#1\endcsname
5242 }%
5243 }

```

Option ‘nextactionraw’.

```

5244 \let\Hy@href@nextactionraw\@empty
5245 \define@key{href}{nextactionraw}{%
5246 \edef\Hy@href@nextactionraw{#1}%
5247 \ifx\Hy@href@nextactionraw\@empty
5248 \else
5249 \Hy@Match\Hy@href@nextactionraw{}{%
5250 ~(\HyPat@ObjRef/|<<.*[/S[/.+>>|}%
5251 \[( ?\HyPat@ObjRef/|<<.*[/S[/.+>>)+ ?)]$}%
5252 }{}{%
5253 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5254 \Hy@href@nextactionraw\MessageBreak
5255 The action is discarded%
5256 }%
5257 }%
5258 \ifx\Hy@href@nextactionraw\@empty
5259 \else
5260 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5261 \fi
5262 \fi
5263 }
5264 \def\HyPat@ObjRef/{.+}

```

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

```

5265 \RequirePackage{url}
5266 \let\HyOrg@url\url
5267 \def\Hurl{\begingroup \Url}
5268 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5269 \def\nolinkurl@#1{\Hurl{#1}}
5270 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5271 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5272 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5273 \providecommand\hyper@image[2]{#2}

5274 \def\hypertarget#1#2{%
5275 \ifHy@nesting
5276 \hyper@@anchor{#1}{#2}%
5277 \else
5278 \hyper@@anchor{#1}{\relax}#2%
5279 \fi
5280 }

```

`\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.

```

5281 \DeclareRobustCommand*{\hyperref}{%
5282 \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5283 }
5284 \def\Hy@babelnormalise#1[#2]{%
5285 \begingroup

```

```

5286 \Hy@safe@activetrue
5287 \edef\Hy@tempa{%
5288 \endgroup
5289 \noexpand#1[{#2}]%
5290 }%
5291 \Hy@tempa
5292 }
5293 \def\@hyperref{\hyper@normalise\@hyperref}
5294 \def\@hyperref#1#2#3{%
5295 \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
5296 \expandafter\tryhyper@link\ref@one\{#1}%
5297 }
5298 \def\tryhyper@link#1\\#2{%
5299 \hyper@@link{#2}{#1}%
5300 }

5301 \def\hyperdef{\@ifnextchar[{\label@hyperdef}{\@hyperdef}}
5302 \def\@hyperdef#1#2#3{% category, name, text
5303 \ifx\\#1\\%
5304 \def\Hy@AnchorName{#2}%
5305 \else
5306 \def\Hy@AnchorName{#1.#2}%
5307 \fi
5308 \ifHy@nesting
5309 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5310 \else
5311 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5312 \fi
5313 }

```

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.

```

5314 \def\label@hyperref[#1]{%
5315 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5316 }%
5317 \def\label@@hyperref#1#2#3{%
5318 \ifx#1\relax
5319 \protect\G@refundefinedtrue
5320 \@latex@warning{%
5321 Hyper reference ‘#2’ on page \thepage \space undefined%
5322 }%
5323 \begingroup
5324 #3%
5325 \endgroup
5326 \else
5327 \hyper@@link{\expandafter\@fifthoffive#1}%
5328 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5329 \fi
5330 }
5331 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5332 % anchor text
5333 \@bsphack
5334 \ifx\\#2\\%
5335 \def\Hy@AnchorName{#3}%
5336 \else
5337 \def\Hy@AnchorName{#2.#3}%
5338 \fi
5339 \if@filesw

```

```

5340 \protected@write\@auxout{}\{}%
5341 \string\newlabel{#1}\{}{}\{}{\Hy@AnchorName}\{}%
5342 }%
5343 \fi
5344 \@esphack
5345 \ifHy@nesting
5346 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5347 \else
5348 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5349 \fi
5350 }

```

16.1 Link box support for XeTeX

```

5351 \newdimen\XeTeXLinkMargin
5352 \setlength{\XeTeXLinkMargin}{2pt}
5353 \ifxetex
5354 \font\XeTeXLink@font=pzdr at 1sp\relax
5355 \newcommand*\XeTeXLink@space{%
5356 \begingroup
5357 \XeTeXLink@font
5358 \@xxxii
5359 \endgroup
5360 }%
5361 \newcommand{\XeTeXLinkBox}[1]{%
5362 \begingroup
5363 \leavevmode
5364 \sbox\z@{#1}%
5365 \begingroup
5366 \dimen@=\dp\z@
5367 \advance\dimen@\XeTeXLinkMargin
5368 \setbox\tw@=\llap{%
5369 \hb@xt@\XeTeXLinkMargin{%
5370 \lower\dimen@\hbox{\XeTeXLink@space}%
5371 \hss
5372 }%
5373 }%
5374 \dp\tw@=\dp\z@
5375 \ht\tw@=\ht\z@
5376 \copy\tw@
5377 \endgroup
5378 \copy\z@
5379 \dimen@=\ht\z@
5380 \advance\dimen@\XeTeXLinkMargin
5381 \setbox\tw@=\rlap{%
5382 \hb@xt@\XeTeXLinkMargin{%
5383 \hss
5384 \raise\dimen@\hbox{\XeTeXLink@space}%
5385 }%
5386 }%
5387 \dp\tw@=\dp\z@
5388 \ht\tw@=\ht\z@
5389 \copy\tw@
5390 \endgroup
5391 }%
5392 \else
5393 \newcommand*\XeTeXLinkBox}[1]{%

```

```

5394 \begingroup
5395 \leavevmode
5396 \sbox\z@{\#1}%
5397 \copy\z@
5398 \endgroup
5399 }%
5400 \fi

```

17 Underlying basic hypertext macros

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

```

5401 \def\hyper@link{\let\Hy@reserved@a\relax
5402 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
5403 }
5404 % #1: type
5405 % #2: URL
5406 % #3: destination name
5407 % #4: text
5408 \def\hyper@link@[#1]#2#3#4{%
5409 \ltx@ifempty{#4}{% link text
5410 \Hy@Warning{Suppressing empty link}%
5411 }{%
5412 \begingroup
5413 \protected@edef\Hy@tempa{#2}%
5414 \edef\Hy@tempb{#3}%
5415 \ifx\Hy@tempa\ltx@empty
5416 \ltx\Hy@tempb\ltx@empty
5417 \Hy@Warning{Suppressing link with empty target}%
5418 \toks@{%
5419 \endgroup
5420 \ltx@secondoftwo
5421 }%
5422 \else
5423 \toks@{%
5424 \endgroup
5425 \hyper@link{#1}%
5426 }%
5427 \fi
5428 \else
5429 \toks@{%
5430 \endgroup
5431 \expandafter\hyper@readexternallink#2\{\{#1}%
5432 }%
5433 \fi
5434 \Hy@safe@activesfalse
5435 \toks@\expandafter{%
5436 \the\expandafter\toks@
5437 \expandafter{\Hy@tempb}{#4}%
5438 }%
5439 \the\toks@
5440 }%
5441 }

```

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.

```

5442 \def\hyper@readexternallink#1\\#2#3#4{%
5443   \begingroup
5444     \let\\\relax
5445   \expandafter\endgroup
5446   \expandafter\@hyper@@readexternallink#1\\#{#2}{#3}{#4}%
5447 }
5448 \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.

```

5449   \@hyper@readexternallink{#2}{#3}{#4}#1::\#{#1}%
5450 }

```

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

```

5451 \def\@pdftempwordfile{file}%
5452 \def\@pdftempwordrun{run}%
5453 \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:

```

5454   \ifx\\#6\\%
5455     \@hyper@linkfile file:#7\\#{#3}{#2}{#7}%
5456   \else
5457     \ifx\\#4\\%
5458       \@hyper@linkfile file:#7\\#{#3}{#2}{#7}%
5459     \else

```

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

```

5460     \def\@pdftempa{#4}%
5461     \ifx\@pdftempa\@pdftempwordfile
5462       \@hyper@linkfile#7\\#{#3}{#2}{#7}%
5463     \else

```

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

```

5464       \ifx\@pdftempa\@pdftempwordrun
5465         \ifHy@pdfa
5466           \Hy@Error{%
5467             PDF/A: Launch action is prohibited%
5468           }\@ehc
5469         \begingroup
5470         \leavevmode
5471         #2%

```

```

5472         \endgroup
5473     \else
5474         \@hyper@launch#7\{\#3}\#2}%
5475     \fi
5476 \else

```

otherwise its a URL

```

5477         \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
5478     \fi
5479 \fi
5480 \fi
5481 \fi
5482 }

```

By default, turn run: into file:

```

5483 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5484 \hyper@linkurl{\#2}%
5485 \Hy@linkfileprefix
5486 #1%
5487 \ifx\#3\%
5488 \else
5489 \hyper@hash
5490 #3%
5491 \fi
5492 }%
5493 }

```

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

```

5494 \def\@hyper@linkfile file:#1\#2#3#4{%
5495 %file url,link string, name, original uri
5496 \filename@parse{\#1}%
5497 \ifx\filename@ext\relax
5498 \edef\filename@ext{\XR@ext}%
5499 \fi
5500 \def\use@file{\filename@area\filename@base.\filename@ext}%
5501 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5502 \hyper@linkfile{\#2}\use@file}\#3}%
5503 }{%
5504 \ifx\@baseurl\empty
5505 \hyper@linkurl{\#2}%
5506 #4\ifx\#3\else\hyper@hash#3\fi
5507 }%
5508 \else
5509 \hyper@linkurl{\#2}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5510 \fi
5511 }%
5512 }

5513 \def\Hy@IfStringEndsWith#1#2{%
5514 \begingroup
5515 \edef\x{\#1}%
5516 \@onelevel@sanitize\x
5517 \edef\x{.\x}%
5518 \edef\y{\#2}%
5519 \@onelevel@sanitize\y
5520 \edef\y{.\y}%
5521 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5522 \endgroup

```

```

5523 \ifx\relax##2\relax
5524 \expandafter\ltx@secondoftwo
5525 \else
5526 \expandafter\ltx@firstoftwo
5527 \fi
5528 }%
5529 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5530 }

5531 \def\Hy@StringLocalhost{localhost}
5532 \@onelevel@sanitize\Hy@StringLocalhost
5533 \def\Hy@CleanupFile#1{%
5534 \edef#1{#1}%
5535 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5536 }
5537 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5538 \begingroup
5539 \toks@{\endgroup}%
5540 \def\x{#1}%
5541 \ifx\x\@empty
5542 \def\x{#2}%
5543 \ifx\x\@empty
5544 \toks@{\endgroup\def#5{/#3}}%
5545 \else
5546 \@onelevel@sanitize\x
5547 \ifx\x\Hy@StringLocalhost
5548 \toks@{\endgroup\def#5{/#3}}%
5549 \fi
5550 \fi
5551 \fi
5552 \the\toks@
5553 }

```

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.

```

5554 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5555 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5556 \ifx\#1\%
5557 #2\Hy@Warning{Ignoring empty anchor}%
5558 \else
5559 \def\anchor@spot{#2#3}%
5560 \let\put@me@back\@empty
5561 \ifx\relax#2\relax
5562 \else
5563 \ifHy@nesting
5564 \else
5565 \ifcat a\noexpand#2\relax
5566 \else
5567 \ifcat 0\noexpand#2 \relax
5568 \else
5569 % \typeout{Anchor start is not alphanumeric %
5570 % on input line\the\inputlineno%
5571 % }%

```

```

5572         \let\anchor@spot\@empty
5573         \def\put@me@back{#2#3}%
5574     \fi
5575 \fi
5576 \fi
5577 \fi
5578 \ifHy@activeanchor
5579     \anchor@spot
5580 \else
5581     \hyper@anchor{#1}%
5582 \fi
5583 \expandafter\put@me@back
5584 \fi
5585 \let\anchor@spot\@empty
5586 }
5587 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5588 \ifHy@destlabel

\hyper@newdestlabel

5589 \def\hyper@newdestlabel#1#2{%
5590     \begingroup
5591     \Hy@safe@activetrue
5592     \edef\x{\endgroup
5593         \noexpand\@newl@bel{HyDL}{#1}{#2}%
5594     }%
5595     \x
5596 }%

\hyper@destlabel@hook

5597 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5598 \newcommand*\Hy@DestRename[2]{%
5599     \ltx@ifundefined{HyDL!#1}{%
5600         \begingroup
5601         \Hy@safe@activetrue
5602         \edef\dest@name{#1}%
5603         \edef\label@name{#2}%
5604         \hyper@destlabel@hook
5605         \Hy@IsNotEmpty{dest@name}{%
5606             \Hy@IsNotEmpty{label@name}{%
5607                 \global\expandafter
5608                 \let\csname HyDL!#1\endcsname\ltx@empty
5609                 \if@files
5610                 \protected@write\@auxout{}{%
5611                     \string\hyper@newdestlabel
5612                     {#1}%
5613                     {\label@name}%
5614                 }%
5615                 \fi
5616             }%
5617         }%
5618         \endgroup
5619     }{}%

```

```

5620 }%

\HyperDestRename
5621 \newcommand*{\HyperDestRename}[2]{%
5622   \AtBeginDocument{%
5623     \Hy@DestRename{#1}{#2}%
5624   }%
5625 }%
5626 \AtBeginDocument{%
5627   \let\HyperDestRename\Hy@DestRename
5628 }%

\Hy@IsNotEmpty
5629 \def\Hy@IsNotEmpty#1{%
5630   \ltx@ifundefined{#1}\ltx@gobble{%
5631     \expandafter\ifx\csname#1\endcsname\ltx@empty
5632     \expandafter\ltx@gobble
5633   \else
5634     \expandafter\ltx@firstofone
5635   \fi
5636 }%
5637 }%

5638 \ltx@GlobalAppendToMacro\label@hook{%
5639   \HyperDestRename\@currentHref\label@name
5640 }%

\HyperDestLabelReplace
5641 \def\HyperDestLabelReplace#1{%
5642   \ltx@ifundefined{HyDL@#1}{%
5643     #1%
5644   }{%
5645     \csname HyDL@#1\endcsname
5646   }%
5647 }%

\HyperDestNameFilter
5648 \let\HyperDestNameFilter\HyperDestLabelReplace

5649 \else

\hyper@newdestlabel
5650 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace
5651 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename
@gobbletwo

5652 \fi
5653 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5654 \AddLineBeginAux{%
5655   \string\providecommand\string\hyper@newdestlabel[2]{}%
5656 }

```

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.

```
5657 \let\htmladdimg\hyperimage
5658 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5659 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5660 \def\htmlref#1#2{% anchor text, label
5661   \label@hyperref[{#2}]{#1}%
5662 }
```

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.

```
5663 \def\@@latextohtmlX{%
5664   \let\hhyperref\hyperref
5665   \def\hyperref##1##2##3##4{% anchor text for HTML
5666     % text to print before label in print
5667     % label
5668     % post-label text in print
5669     ##2\ref{##4}##3%
5670   }%
5671 }
```

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.

```
5672 \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
5673 \def\HyField@NewFlag#1#2{%
5674   \lowercase{\HyField@NewOption{#2}}%
5675   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5676 }
```

```

\HyField@NewFlagOnly
5677 \def\HyField@NewFlagOnly#1#2{%
5678   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5679 }

\HyField@NewOption #1: option name
5680 \def\HyField@NewOption#1{%
5681   \expandafter\newif\csname ifFld@#1\endcsname
5682   \define@key{Field}{#1}[true]{%
5683     \lowercase{\Field@boolkey{##1}}{#1}%
5684   }%
5685 }

\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
5686 \def\HyField@NewBitsetFlag#1#2#3#4{%
5687   \begingroup
5688     \count@=#4\relax
5689     \advance\count@\m@ne
5690     \def\x##1{%
5691       \endgroup
5692       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5693       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5694         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5695           (\number#4) #2%
5696         }%
5697       \else
5698         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5699           \csname HyField@#3@#1\endcsname
5700           /#2%
5701         }%
5702       \fi
5703     }%
5704     \expandafter\x\expandafter{\the\count@}%
5705 }

\HyField@UseFlag The bit set is HyField@#1
5706 \def\HyField@UseFlag#1#2{%
5707   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5708 }

\HyField@@UseFlag
5709 \def\HyField@@UseFlag#1#2{%
5710   \bitsetSetValue{HyField@#2}{%
5711     \csname HyField@#2@#1\endcsname
5712   }{%
5713     \csname ifFld@#1\endcsname 1\else 0\fi
5714   }%
5715 }

\HyField@SetFlag The bit set is HyField@#1
5716 \def\HyField@SetFlag#1#2{%
5717   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5718 }

```

```

\HyField@@SetFlag
5719 \def\HyField@@SetFlag#1#2{%
5720 \bitsetSetValue{HyField@#2}{%
5721 \csname HyField@#2@#1\endcsname
5722 }{1}%
5723 }

\HyField@PrintFlags
5724 \def\HyField@PrintFlags#1#2{%
5725 \ifHy@verbose
5726 \begingroup
5727 \let\Hy@temp\@empty
5728 \let\MessageBreak\relax
5729 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5730 \bitsetGetSetBitList{HyField@#1}\do{%
5731 \edef\Hy@temp{%
5732 \Hy@temp
5733 \csname HyField@#1@\x\endcsname\MessageBreak
5734 }%
5735 }%
5736 \edef\x{\endgroup
5737 \noexpand\Hy@Info{%
5738 Field flags: %
5739 \expandafter\ifx\@car#1\@nil S\else/\fi
5740 #1 %
5741 \bitsetGetDec{HyField@#1} %
5742 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5743 \Hy@temp
5744 for #2%
5745 }%
5746 }\x
5747 \fi
5748 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5749 \HyField@NewFlag{Ff}{ReadOnly}{1}
5750 \HyField@NewFlag{Ff}{Required}{2}
5751 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5752 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5753 \HyField@NewFlag{Ff}{Radio}{16}
5754 \HyField@NewFlag{Ff}{Pushbutton}{17}
5755 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5756 \HyField@NewFlag{Ff}{Multiline}{13}
5757 \HyField@NewFlag{Ff}{Password}{14}
5758 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5759 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5760 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5761 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5762 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5763 \HyField@NewFlag{Ff}{Combo}{18}

```

```

5764 \HyField@NewFlag{Ff}{Edit}{19}
5765 \HyField@NewFlag{Ff}{Sort}{20}
5766 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5767 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5768 \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.

```

5769 \newif\ifFld@popdown
5770 \define@key{Field}{popdown}{true}{%
5771 \lowercase{\Field@boolkey{#1}}{popdown}%
5772 }

```

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.

```

5773 \HyField@NewFlag{F}{Invisible}{1}
5774 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5775 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5776 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5777 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5778 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5779 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5780 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5781 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5782 \ifHy@pdfa
5783 \def\HyField@PDFAFflagWarning#1#2{%
5784 \Hy@Warning{%
5785 PDF/A: Annotation flag ‘#1’ must\MessageBreak
5786 be set to ‘#2’%
5787 }%
5788 }%
5789 \Fld@invisiblefalse
5790 \def\Fld@invisibletrue{%
5791 \HyField@PDFAFflagWarning{invisible}{false}%
5792 }%
5793 \Fld@hiddenfalse
5794 \def\Fld@hiddentrue{%
5795 \HyField@PDFAFflagWarning{hidden}{false}%
5796 }%
5797 \Fld@printtrue
5798 \def\Fld@printfalse{%
5799 \HyField@PDFAFflagWarning{print}{true}%
5800 }%
5801 \Fld@nozoomtrue
5802 \def\Fld@nozoomfalse{%
5803 \HyField@PDFAFflagWarning{nozoom}{true}%
5804 }%
5805 \Fld@norotatetrue
5806 \def\Fld@norotatefalse{%
5807 \HyField@PDFAFflagWarning{norotate}{true}%
5808 }%
5809 \Fld@noviewfalse
5810 \def\Fld@noviewtrue{%

```

```

5811 \HyField@PDFAFIWarning{noview}{false}%
5812 }%
5813 \fi

```

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

```

5814 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5815 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5816 \HyField@NewFlag{Submit}{GetMethod}{4}
5817 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5818 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5819 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5820 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5821 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5822 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5823 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5824 \HyField@NewFlag{Submit}{ExclFKey}{12}
5825 \HyField@NewFlag{Submit}{EmbedForm}{14}

5826 \define@key{Field}{export}{%
5827 \lowercase{\def\Hy@temp{#1}}%
5828 \@ifundefined{Fld@export@\Hy@temp}{%
5829 \onelevel@sanitize\Hy@temp
5830 \Hy@Error{%
5831 Unknown export format '\Hy@temp'.\MessageBreak
5832 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5833 }\@ehc
5834 }{%
5835 \let\Fld@export\Hy@temp
5836 }%
5837 }
5838 \def\Fld@export{fdf}
5839 \@namedef{Fld@export@fdf}{0}%
5840 \@namedef{Fld@export@html}{1}%
5841 \@namedef{Fld@export@xfdf}{2}%
5842 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5843 \def\HyField@FlagsSubmit{%
5844 \bitsetReset{HyField@Submit}%
5845 \ifcase\@nameuse{Fld@export@\Fld@export} %
5846 % FDF
5847 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5848 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5849 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5850 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5851 \HyField@UseFlag{Submit}{CanonicalFormat}%
5852 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5853 \HyField@UseFlag{Submit}{ExclFKey}%
5854 \HyField@UseFlag{Submit}{EmbedForm}%
5855 \or % HTML
5856 \HyField@SetFlag{Submit}{ExportFormat}%
5857 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5858 \HyField@UseFlag{Submit}{GetMethod}%
5859 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5860 \HyField@UseFlag{Submit}{CanonicalFormat}%

```

```

5861 \or % XFDF
5862   \HyField@SetFlag{Submit}{XFDF}%
5863   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5864   \HyField@UseFlag{Submit}{SubmitCoordinates}%
5865   \HyField@UseFlag{Submit}{CanonicalFormat}%
5866 \or % PDF
5867   \HyField@SetFlag{Submit}{SubmitPDF}%
5868   \HyField@UseFlag{Submit}{GetMethod}%
5869 \fi
5870 \HyField@PrintFlags{Submit}{submit button field}%
5871 \bitsetIsEmpty{HyField@Submit}{%
5872   \let\Fld@submitflags\tx@empty
5873 }{%
5874   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5875 }%
5876 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5877 \def\HyField@FlagsAnnot#1{%
5878   \bitsetReset{HyField@F}%
5879   \HyField@UseFlag{F}{Invisible}%
5880   \HyField@UseFlag{F}{Hidden}%
5881   \HyField@UseFlag{F}{Print}%
5882   \HyField@UseFlag{F}{NoZoom}%
5883   \HyField@UseFlag{F}{NoRotate}%
5884   \HyField@UseFlag{F}{NoView}%
5885   \HyField@UseFlag{F}{Locked}%
5886   \HyField@UseFlag{F}{ToggleNoView}%
5887   \HyField@UseFlag{F}{LockedContents}%
5888   \HyField@PrintFlags{F}{#1}%
5889   \bitsetIsEmpty{HyField@F}{%
5890     \let\Fld@annotflags\tx@empty
5891   }{%
5892     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5893   }%
5894 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5895 \def\HyField@FlagsPushButton{%
5896   \HyField@FlagsAnnot{push button field}%
5897   \bitsetReset{HyField@Ff}%
5898   \HyField@UseFlag{Ff}{ReadOnly}%
5899   \HyField@UseFlag{Ff}{Required}%
5900   \HyField@UseFlag{Ff}{NoExport}%
5901   \HyField@SetFlag{Ff}{Pushbutton}%
5902   \HyField@PrintFlags{Ff}{push button field}%
5903   \bitsetIsEmpty{HyField@Ff}{%
5904     \let\Fld@flags\tx@empty
5905   }{%
5906     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5907   }%
5908 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```
5909 \def\HyField@FlagsCheckBox{%
5910   \HyField@FlagsAnnot{check box field}%
5911   \bitsetReset{HyField@Ff}%
5912   \HyField@UseFlag{Ff}{ReadOnly}%
5913   \HyField@UseFlag{Ff}{Required}%
5914   \HyField@UseFlag{Ff}{NoExport}%
5915   \HyField@PrintFlags{Ff}{check box field}%
5916   \bitsetIsEmpty{HyField@Ff}{%
5917     \let\Fld@flags\ltx@empty
5918   }{%
5919     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5920   }%
5921 }
```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```
5922 \def\HyField@FlagsRadioButton{%
5923   \HyField@FlagsAnnot{radio button field}%
5924   \bitsetReset{HyField@Ff}%
5925   \HyField@UseFlag{Ff}{ReadOnly}%
5926   \HyField@UseFlag{Ff}{Required}%
5927   \HyField@UseFlag{Ff}{NoExport}%
5928   \HyField@UseFlag{Ff}{NoToggleToOff}%
5929   \HyField@SetFlag{Ff}{Radio}%
5930   \HyField@UseFlag{Ff}{RadiosInUnison}%
5931   \HyField@PrintFlags{Ff}{radio button field}%
5932   \bitsetIsEmpty{HyField@Ff}{%
5933     \let\Fld@flags\ltx@empty
5934   }{%
5935     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5936   }%
5937 }
```

20.1.7 Text fields

\HyField@FlagsText

```
5938 \def\HyField@FlagsText{%
5939   \HyField@FlagsAnnot{text field}%
5940   \bitsetReset{HyField@Ff}%
5941   \HyField@UseFlag{Ff}{ReadOnly}%
5942   \HyField@UseFlag{Ff}{Required}%
5943   \HyField@UseFlag{Ff}{NoExport}%
5944   \HyField@UseFlag{Ff}{Multiline}%
5945   \HyField@UseFlag{Ff}{Password}%
5946   \HyField@UseFlag{Ff}{FileSelect}%
5947   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5948   \HyField@UseFlag{Ff}{DoNotScroll}%
5949   \ifFld@comb
5950     \ifcase0\ifFld@multiline
5951       \else\ifFld@password
5952       \else\ifFld@fileselect
5953       \else 1\fi\fi\fi\relax
5954     \Hy@Error{%
```

```

5955     Field option 'comb' cannot used together with\MessageBreak
5956     'multiline', 'password', or 'fileselect'%
5957   }\@ehc
5958   \else
5959     \HyField@UseFlag{Ff}{Comb}%
5960   \fi
5961 \fi
5962 \HyField@UseFlag{Ff}{RichText}%
5963 \HyField@PrintFlags{Ff}{text field}%
5964 \bitsetIsEmpty{HyField@Ff}{%
5965   \let\Fld@flags\ltx@empty
5966 }{%
5967   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5968 }%
5969 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5970 \def\HyField@FlagsChoice{%
5971   \HyField@FlagsAnnot{choice field}%
5972   \bitsetReset{HyField@Ff}%
5973   \HyField@UseFlag{Ff}{ReadOnly}%
5974   \HyField@UseFlag{Ff}{Required}%
5975   \HyField@UseFlag{Ff}{NoExport}%
5976   \HyField@UseFlag{Ff}{Combo}%
5977   \ifFld@combo
5978     \HyField@UseFlag{Ff}{Edit}%
5979   \fi
5980   \HyField@UseFlag{Ff}{Sort}%
5981   \HyField@UseFlag{Ff}{MultiSelect}%
5982   \ifFld@combo
5983     \ifFld@edit
5984       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5985     \fi
5986   \fi
5987   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5988   \HyField@PrintFlags{Ff}{choice field}%
5989   \bitsetIsEmpty{HyField@Ff}{%
5990     \let\Fld@flags\ltx@empty
5991   }{%
5992     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5993   }%
5994 }

```

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.

```

5995 \def\HyField@PDFChoices#1{%
5996   \begingroup
5997   \global\let\Fld@choices\ltx@empty
5998   \let\HyTmp@optlist\ltx@empty
5999   \let\HyTmp@optitem\relax

```

```

6000 \count@=0 %
6001 \kv@parse{#1}{%
6002   \Hy@pdfstringdef\kv@key\kv@key
6003   \ifx\kv@value\relax
6004     \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6005       \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}}%
6006     \else
6007       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6008     \fi
6009   \else
6010     \Hy@pdfstringdef\kv@value\kv@value
6011     \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}}%
6012   \fi
6013 \edef\HyTmp@optlist{%
6014   \HyTmp@optlist
6015   \HyTmp@optitem{\the\count@}{\kv@key}0%
6016 }%
6017 \advance\count@ by 1 %
6018 \@gobbletwo
6019 }%
6020 \xdef\Fld@choices{/Opt[\Fld@choices]}%
6021 \ifFld@multiselect
6022   \HyField@@PDFChoices{DV}\Fld@default
6023   \HyField@@PDFChoices{V}\Fld@value
6024 \else
6025   \ifx\Fld@default\relax
6026   \else
6027     \pdfstringdef\Hy@gtemp\Fld@default
6028     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6029   \fi
6030   \ifx\Fld@value\relax
6031   \else
6032     \pdfstringdef\Hy@gtemp\Fld@value
6033     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6034   \fi
6035 \fi
6036 \endgroup
6037 }

```

\HyField@@PDFChoices

```

6038 \def\HyField@@PDFChoices#1#2{%
6039   \ifx#2\relax
6040   \else
6041     \count@=0 %
6042     \def\HyTmp@optitem##1##2##3{%
6043       \def\HyTmp@key{##2}%
6044       \ifx\HyTmp@key\Hy@gtemp
6045         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6046           \HyTmp@optlist
6047           \HyTmp@optitem{##1}{##2}1%
6048         }%
6049         \let\HyTmp@found=Y%
6050       \else
6051         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6052           \HyTmp@optlist
6053           \HyTmp@optitem{##1}{##2}##3%
6054         }%
6055       \fi

```

```

6056 }%
6057 \expandafter\comma@parse\expandafter{#2}{%
6058 \pdfstringdef\Hy@gtemp\comma@entry
6059 \let\HyTmp@found=N %
6060 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6061 \HyTmp@optlist
6062 \ifx\HyTmp@found Y%
6063 \advance\count@ by 1 %
6064 \else
6065 \@onelevel@sanitize\comma@entry
6066 \PackageWarning{hyperref}{%
6067 \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
6068 \MessageBreak
6069 it cannot be found in the choices%
6070 }%
6071 \fi
6072 \@gobble
6073 }%
6074 \def\HyTmp@optitem##1##2##3{%
6075 \ifnum##3=1 %
6076 (##2)%
6077 \fi
6078 }%
6079 \ifcase\count@
6080 \or
6081 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6082 \else
6083 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6084 \ifx#1V%
6085 \def\HyTmp@optitem##1##2##3{%
6086 \ifnum##3=1 %
6087 \@firstofone{ ##1}%
6088 \fi
6089 }%
6090 \edef\HyTmp@optlist{\HyTmp@optlist}%
6091 \xdef\Fld@choices{%
6092 \Fld@choices
6093 /I[\expandafter\@firstofone\HyTmp@optlist]%
6094 }%
6095 \fi
6096 \fi
6097 \fi
6098 }

```

20.3 Forms

\HyField@SetKeys

```

6099 \def\HyField@SetKeys{%
6100 \kvsetkeys{Field}%
6101 }

6102 \newif\ifFld@checked
6103 \newif\ifFld@disabled
6104 \Fld@checkedfalse
6105 \Fld@disabledfalse
6106 \newcount\Fld@menulength
6107 \newdimen\Field@Width

```

```

6108 \newdimen\Fld@charsize
6109 \Fld@charsize=10\p@
6110 \def\Fld@maxlen{0}
6111 \def\Fld@align{0}
6112 \def\Fld@color{0 0 0 rg}
6113 \def\Fld@bcolor{1 1 1}
6114 \def\Fld@bordercolor{1 0 0}
6115 \def\Fld@bordersep{1\p@}
6116 \def\Fld@borderwidth{1}
6117 \def\Fld@borderstyle{S}
6118 \def\Fld@cbsymbol{4}
6119 \def\Fld@radiosymbol{H}
6120 \def\Fld@rotation{0}
6121 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
6122 \def\endForm{\@endForm}
6123 \newif\ifForm@html
6124 \Form@htmlfalse
6125 \def\Form@boolkey#1#2{%
6126   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6127 }
6128 \define@key{Form}{action}{%
6129   \hyper@normalise\Hy@DefFormAction{#1}%
6130 }
6131 \def\Hy@DefFormAction{\def\Form@action}
6132 \def\enc@html{html}
6133 \define@key{Form}{encoding}{%
6134   \def\Hy@tempa{#1}%
6135   \ifx\Hy@tempa\enc@html
6136     \Form@htmltrue
6137     \def\Fld@export{html}%
6138   \else
6139     \Hy@Warning{%
6140       Form 'encoding' key with \MessageBreak
6141       unknown value '#1'%
6142     }%
6143     \Form@htmlfalse
6144   \fi
6145 }
6146 \define@key{Form}{method}{%
6147   \lowercase{\def\Hy@temp{#1}}%
6148   \@ifundefined{Form@method@\Hy@temp}{%
6149     \@onelevel@sanitize\Hy@temp
6150     \Hy@Error{%
6151       Unknown method '\Hy@temp'\MessageBreak
6152       Known values are 'post' and 'get'%
6153     }\@ehc
6154   }{%
6155     \let\Form@method\Hy@temp
6156     \ifcase\@nameuse{Form@method@\Hy@temp} %
6157       \Fld@getmethodfalse
6158     \else
6159       \Fld@getmethodtrue
6160     \fi
6161   }%
6162 }
6163 \def\Form@method{}
6164 \@namedef{Form@method@post}{0}

```

```

6165 \@namedef{Form@method@get}{1}
6166 \newif\ifHyField@NeedAppearances
6167 \def\HyField@NeedAppearancesfalse{%
6168   \global\let\ifHyField@NeedAppearances\iffalse
6169 }
6170 \def\HyField@NeedAppearancetrue{%
6171   \global\let\ifHyField@NeedAppearances\iftrue
6172 }
6173 \HyField@NeedAppearancetrue
6174 \define@key{Form}{NeedAppearances}[true]{%
6175   \edef\Hy@tempa{#1}%
6176   \ifx\Hy@tempa\Hy@true
6177     \HyField@NeedAppearancetrue
6178   \else
6179     \ifx\Hy@tempa\Hy@false
6180       \HyField@NeedAppearancesfalse
6181     \else
6182       \Hy@Error{%
6183         Unexpected value '\Hy@tempa'\MessageBreak
6184         of option 'NeedAppearances' instead of\MessageBreak
6185         'true' or 'false'%
6186       }\@ehc
6187     \fi
6188   \fi
6189 }
6190 \def\Field@boolkey#1#2{%
6191   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6192 }
6193 \ifHy@texht
6194   \newtoks\Field@toks
6195   \Field@toks={ }%
6196   \def\Field@addtoks#1#2{%
6197     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6198     \@processme
6199   }%
6200 \else
6201   \def\Hy@WarnHTMLFieldOption#1{%
6202     \Hy@Warning{%
6203       HTML field option '#1'\MessageBreak
6204       is ignored%
6205     }%
6206   }%
6207 \fi
6208 \def\Fld@checkequals#1=#2=#3\\{%
6209   \def\@currDisplay{#1}%
6210   \ifx\\#2\\%
6211     \def\@currValue{#1}%
6212   \else
6213     \def\@currValue{#2}%
6214   \fi
6215 }
6216 \define@key{Field}{loc}{%
6217   \def\Fld@loc{#1}%
6218 }
6219 \define@key{Field}{checked}[true]{%
6220   \lowercase{\Field@boolkey{#1}}{checked}%
6221 }

```

```

6222 \define@key{Field}{disabled}[true]{%
6223   \lowercase{\Field@boolkey{#1}}{disabled}%
6224 }
6225 \ifHy@texht
6226   \define@key{Field}{accesskey}{%
6227     \Field@addtoks{accesskey}{#1}%
6228   }%
6229   \define@key{Field}{tabkey}{%
6230     \Field@addtoks{tabkey}{#1}%
6231   }%
6232 \else
6233   \define@key{Field}{accesskey}{%
6234     \Hy@WarnHTMLFieldOption{accesskey}%
6235   }%
6236   \define@key{Field}{tabkey}{%
6237     \Hy@WarnHTMLFieldOption{tabkey}%
6238   }%
6239 \fi
6240 \define@key{Field}{name}{%
6241   \def\Fld@name{#1}%
6242 }
6243 \let\Fld@altname\relax
6244 \define@key{Field}{altname}{%
6245   \def\Fld@altname{#1}%
6246 }
6247 \let\Fld@mappingname\relax
6248 \define@key{Field}{mappingname}{%
6249   \def\Fld@mappingname{#1}%
6250 }
6251 \define@key{Field}{width}{%
6252   \def\Fld@width{#1}%
6253   \Field@Width#1\setbox0=\hbox{m}%
6254 }
6255 \define@key{Field}{maxlen}{%
6256   \def\Fld@maxlen{#1}%
6257 }
6258 \define@key{Field}{menulength}{%
6259   \Fld@menulength=#1\relax
6260 }
6261 \define@key{Field}{height}{%
6262   \def\Fld@height{#1}%
6263 }
6264 \define@key{Field}{charsize}{%
6265   \setlength{\Fld@charsize}{#1}%
6266 }
6267 \define@key{Field}{borderwidth}{%
6268   \Hy@defaultbp\Fld@borderwidth{#1}%
6269 }
6270 \def\Hy@defaultbp#1#2{%
6271   \begingroup
6272   \afterassignment\Hy@defaultbpAux
6273   \dimen@=#2bp\relax{#1}{#2}%
6274 }
6275 \begingroup\expandafter\expandafter\expandafter\endgroup
6276 \expandafter\ifx\csname dimexpr\endcsname\relax
6277   \def\Hy@defaultbpAux#1\relax#2#3{%
6278     \ifx!#1!%

```

```

6279 \endgroup
6280 \def#2{#3}%
6281 \else
6282 \dimen@=.99626\dimen@
6283 \edef\x{\endgroup
6284 \def\noexpand#2{%
6285 \strip@pt\dimen@
6286 }%
6287 }\x
6288 \fi
6289 }%
6290 \else
6291 \def\Hy@defaultbpAux#1\relax#2#3{%
6292 \ifx!#1!%
6293 \endgroup
6294 \def#2{#3}%
6295 \else
6296 \edef\x{\endgroup
6297 \def\noexpand#2{%
6298 \strip@pt\dimexpr\dimen@*800/803\relax
6299 }%
6300 }\x
6301 \fi
6302 }%
6303 \fi
6304 \define@key{Field}{borderstyle}{%
6305 \let\Hy@temp\Fld@borderstyle
6306 \def\Fld@borderstyle{#1}%
6307 \Hy@Match\Fld@borderstyle}{}%
6308 ^[SDBIU]$%
6309 }-}{%
6310 \Hy@Warning{%
6311 Invalid value '@pdfborderstyle'\MessageBreak
6312 for option 'pdfborderstyle'. Valid values:\MessageBreak
6313 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6314 \space\space I (Inset), U (Underline)\MessageBreak
6315 Option setting is ignored%
6316 }%
6317 \let\Fld@borderstyle\Hy@temp
6318 }%
6319 }
6320 \define@key{Field}{bordersep}{%
6321 \def\Fld@bordersep{#1}%
6322 }
6323 \define@key{Field}{default}{%
6324 \def\Fld@default{#1}%
6325 }
6326 \define@key{Field}{align}{%
6327 \def\Fld@align{#1}%
6328 }
6329 \define@key{Field}{value}{%
6330 \Hy@pdfstringdef\Fld@value{#1}%
6331 }
6332 \define@key{Field}{checkboxsymbol}{%
6333 \Fld@DingDef\Fld@cbsymbol{#1}%
6334 }
6335 \define@key{Field}{radiosymbol}{%

```

```

6336 \Fld@DingDef\Fld@radiosymbol{#1}%
6337 }
6338 \def\Fld@DingDef#1#2{%
6339 \let\Fld@temp\ltx@empty
6340 \Fld@@@DingDef#2\ding{}}\@nil
6341 \let#1\Fld@temp
6342 }
6343 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6344 \expandafter\def\expandafter\Fld@temp\expandafter{%
6345 \Fld@temp
6346 #1%
6347 }%
6348 \ifx\\#3\\%
6349 \expandafter\@gobble
6350 \else
6351 \begingroup
6352 \lccode'0=#2\relax
6353 \lowercase{\endgroup
6354 \expandafter\def\expandafter\Fld@temp\expandafter{%
6355 \Fld@temp
6356 0%
6357 }%
6358 }%
6359 \expandafter\@firstofone
6360 \fi
6361 {%
6362 \Fld@@@DingDef#3\@nil
6363 }%
6364 }

6365 \define@key{Field}{rotation}{%
6366 \def\Fld@rotation{#1}%
6367 }

6368 \define@key{Field}{backgroundcolor}{%
6369 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6370 }
6371 \define@key{Field}{bordercolor}{%
6372 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6373 }
6374 \define@key{Field}{color}{%
6375 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6376 }

6377 \let\Fld@onclick@code\ltx@empty
6378 \let\Fld@format@code\ltx@empty
6379 \let\Fld@validate@code\ltx@empty
6380 \let\Fld@calculate@code\ltx@empty
6381 \let\Fld@keystroke@code\ltx@empty
6382 \let\Fld@onfocus@code\ltx@empty
6383 \let\Fld@onblur@code\ltx@empty
6384 \let\Fld@onmousedown@code\ltx@empty
6385 \let\Fld@onmouseup@code\ltx@empty
6386 \let\Fld@onenter@code\ltx@empty
6387 \let\Fld@onexit@code\ltx@empty
6388 \def\Hy@temp#1{%
6389 \expandafter\Hy@@@temp\csname Fld@#1@code\endcsname{#1}%
6390 }
6391 \def\Hy@@@temp#1#2{%

```

```

6392 \ifHy@pdfa
6393   \define@key{Field}{#2}{%
6394     \Hy@Error{%
6395       PDF/A: Additional action '#2' is prohibited%
6396     }\@ehc
6397   }%
6398 \else
6399   \define@key{Field}{#2}{%
6400     \def#1{##1}%
6401   }%
6402 \fi
6403 }
6404 \Hy@temp{keystroke}
6405 \Hy@temp{format}
6406 \Hy@temp{validate}
6407 \Hy@temp{calculate}
6408 \Hy@temp{onfocus}
6409 \Hy@temp{onblur}
6410 \Hy@temp{onenter}
6411 \Hy@temp{onexit}

6412 \let\Fld@calculate@sortkey\ltx@empty
6413 \define@key{Field}{calculatesortkey}[1]{%
6414   \def\Fld@calculate@sortkey{#1}%
6415 }

6416 \ifHy@texht
6417   \def\Hy@temp#1{%
6418     \define@key{Field}{#1}{%
6419       \Field@addtoks{#1}{##1}%
6420     }%
6421   }%
6422 \else
6423   \def\Hy@temp#1{%
6424     \define@key{Field}{#1}{%
6425       \Hy@WarnHTMLFieldOption{#1}%
6426     }%
6427   }%
6428 \fi
6429 \Hy@temp{ondblclick}
6430 \Hy@temp{onmousedown}
6431 \Hy@temp{onmouseup}
6432 \Hy@temp{onmouseover}
6433 \Hy@temp{onmousemove}
6434 \Hy@temp{onmouseout}
6435 \Hy@temp{onkeydown}
6436 \Hy@temp{onkeyup}
6437 \Hy@temp{onselect}
6438 \Hy@temp{onchange}
6439 \Hy@temp{onkeypress}
6440 \ifHy@texht
6441   \define@key{Field}{onclick}{%
6442     \Field@addtoks{onclick}{#1}%
6443   }%
6444 \else
6445   \ifHy@pdfa
6446     \define@key{Field}{onclick}{%
6447       \Hy@Error{%
6448         PDF/A: Action 'onclick' is prohibited%

```

```

6449     }\@ehc
6450   }%
6451 \else
6452   \define@key{Field}{onclick}{%
6453     \def\Fld@onclick@code{#1}%
6454   }%
6455 \fi
6456 \fi

6457 \DeclareRobustCommand\TextField{%
6458   \@ifnextchar[{\@TextField}{\@TextField[]}%
6459 }
6460 \DeclareRobustCommand\ChoiceMenu{%
6461   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6462 }
6463 \DeclareRobustCommand\CheckBox{%
6464   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6465 }
6466 \DeclareRobustCommand\PushButton{%
6467   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6468 }
6469 \DeclareRobustCommand\Gauge{%
6470   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6471 }
6472 \DeclareRobustCommand\Submit{%
6473   \@ifnextchar[{\@Submit}{\@Submit[]}%
6474 }
6475 \DeclareRobustCommand\Reset{%
6476   \@ifnextchar[{\@Reset}{\@Reset[]}%
6477 }
6478 \def\LayoutTextField#1#2{% label, field
6479   #1 #2%
6480 }
6481 \def\LayoutChoiceField#1#2{% label, field
6482   #1 #2%
6483 }
6484 \def\LayoutCheckField#1#2{% label, field
6485   #1 #2%
6486 }
6487 \def\LayoutPushButtonField#1{% button
6488   #1%
6489 }
6490 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6491 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6492 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6493 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6494 \def\MakeButtonField#1{%
6495   \sbox0{%
6496     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6497   }%
6498   \@tempdima\ht0 %
6499   \advance\@tempdima by \Fld@borderwidth bp %
6500   \advance\@tempdima by \Fld@borderwidth bp %
6501   \ht0\@tempdima
6502   \@tempdima\dp0 %
6503   \advance\@tempdima by \Fld@borderwidth bp %
6504   \advance\@tempdima by \Fld@borderwidth bp %
6505   \dp0\@tempdima

```

```

6506 \box0\relax
6507 }
6508 \def\DefaultHeightofSubmit{14pt}
6509 \def\DefaultWidthofSubmit{2cm}
6510 \def\DefaultHeightofReset{14pt}
6511 \def\DefaultWidthofReset{2cm}
6512 \def\DefaultHeightofCheckBox{\baselineskip}
6513 \def\DefaultWidthofCheckBox{\baselineskip}
6514 \def\DefaultHeightofChoiceMenu{\baselineskip}
6515 \def\DefaultWidthofChoiceMenu{\baselineskip}
6516 \def\DefaultHeightofText{\baselineskip}
6517 \def\DefaultHeightofTextMultiline{4\baselineskip}
6518 \def\DefaultWidthofText{3cm}
6519 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6520 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6521 \def\DefaultOptionsofPushButton{print}
6522 \def\DefaultOptionsofCheckBox{print}
6523 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6524 \def\DefaultOptionsofListBox{print}
6525 \def\DefaultOptionsofComboBox{print,edit,sort}
6526 \def\DefaultOptionsofPopdownBox{print}
6527 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6528 \ifHy@hyperfigures
6529 \Hy@Info{Hyper figures ON}%
6530 \else
6531 \Hy@Info{Hyper figures OFF}%
6532 \fi
6533 \ifHy@nesting
6534 \Hy@Info{Link nesting ON}%
6535 \else
6536 \Hy@Info{Link nesting OFF}%
6537 \fi
6538 \ifHy@hyperindex
6539 \Hy@Info{Hyper index ON}%
6540 \else
6541 \Hy@Info{Hyper index OFF}%
6542 \fi
6543 \ifHy@backref
6544 \Hy@Info{backreferencing ON}%
6545 \else
6546 \Hy@Info{backreferencing OFF}%
6547 \fi
6548 \ifHy@colorlinks
6549 \Hy@Info{Link coloring ON}%
6550 \else
6551 \Hy@Info{Link coloring OFF}%
6552 \fi
6553 \ifHy@ocgcolorlinks
6554 \Hy@Info{Link coloring with OCG ON}%
6555 \else
6556 \Hy@Info{Link coloring with OCG OFF}%
6557 \fi

```

```

6558 \ifHy@pdfa
6559 \Hy@Info{PDF/A mode ON}%
6560 \else
6561 \Hy@Info{PDF/A mode OFF}%
6562 \fi

```

22 Low-level utility macros

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

```

6563 \edef\hyper@hash{\string#}
6564 \edef\hyper@tilde{\string~}
6565 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6566 \def\@currentHref{Doc-Start}
6567 \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.

```

6568 \Hy@AtBeginDocument{%
6569 \Hy@pdfstringtrue
6570 \PDF@SetupDoc
6571 \let\PDF@SetupDoc\@empty
6572 \Hy@DisableOption{pdfpagescrop}%
6573 \Hy@DisableOption{pdfpagemode}%
6574 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6575 \Hy@DisableOption{pdfdirection}%
6576 \Hy@DisableOption{pdfviewarea}%
6577 \Hy@DisableOption{pdfviewclip}%
6578 \Hy@DisableOption{pdfprintarea}%
6579 \Hy@DisableOption{pdfprintclip}%
6580 \Hy@DisableOption{pdfprintscaling}%
6581 \Hy@DisableOption{pdfduplex}%
6582 \Hy@DisableOption{pdfpicktraybypdfsize}%
6583 \Hy@DisableOption{pdfprintpagerange}%
6584 \Hy@DisableOption{pdfnumcopies}%
6585 \Hy@DisableOption{pdfstartview}%
6586 \Hy@DisableOption{pdfstartpage}%
6587 \Hy@DisableOption{pdftoolbar}%
6588 \Hy@DisableOption{pdfmenubar}%
6589 \Hy@DisableOption{pdfwindowui}%
6590 \Hy@DisableOption{pdfwindow}%
6591 \Hy@DisableOption{pdfcenterwindow}%
6592 \Hy@DisableOption{pdfdisplaydoctitle}%
6593 \Hy@DisableOption{pdfpagelayout}%
6594 \Hy@DisableOption{pdflang}%
6595 \Hy@DisableOption{baseurl}%
6596 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6597 \Hy@pdfstringfalse
6598 }

```

Ignore star from referencing macros:

```

6599 \LetLtxMacro\NoHy@OrgRef\ref
6600 \DeclareRobustCommand*{\ref}{%
6601 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6602 }
6603 \LetLtxMacro\NoHy@OrgPageRef\pageref

```

```

6604 \DeclareRobustCommand*\pageref}{%
6605   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6606 }

```

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.

```

6607 \def\NoHyper{%
6608   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6609   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6610   \global\let\hyper@livelink\hyper@link
6611   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6612   \let\hyper@anchor\ltx@gobble
6613   \let\hyper@anchorstart\ltx@gobble
6614   \def\hyper@anchorend{\Hy@xspace@end}%
6615   \let\hyper@linkstart\ltx@gobbletwo
6616   \def\hyper@linkend{\Hy@xspace@end}%
6617   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6618   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6619   \let\Hy@backout\@gobble
6620 }
6621 \def\stop@hyper{%
6622   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6623   \let\Hy@backout\@gobble
6624   \let\hyper@@anchor\ltx@gobble
6625   \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6626   \let\hyper@anchor\ltx@gobble
6627   \let\hyper@anchorstart\ltx@gobble
6628   \def\hyper@anchorend{\Hy@xspace@end}%
6629   \let\hyper@linkstart\ltx@gobbletwo
6630   \def\hyper@linkend{\Hy@xspace@end}%
6631   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6632   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6633 }
6634 \def\endNoHyper{%
6635   \global\let\hyper@link\hyper@livelink
6636 }
6637 \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:

```

6638 \*nohyperref
6639 \RequirePackage{letltxmacro}[2008/06/13]
6640 \let\hyper@@anchor\@gobble
6641 \def\hyper@link##1##2##3{##3}%

```

```

6642 \let\hyper@anchorstart\@gobble
6643 \let\hyper@anchorend\@empty
6644 \let\hyper@linkstart\@gobbletwo
6645 \let\hyper@linkend\@empty
6646 \def\hyper@linkurl#1#2{#1}%
6647 \def\hyper@linkfile#1#2#3{#1}%
6648 \def\hyper@link@{#1}#2#3{#1}%
6649 \let\PDF@SetupDoc\@empty
6650 \let\PDF@FinishDoc\@empty
6651 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6652 \def\Acrobatmenu#1#2{\leavevmode#2}
6653 \let\pdfstringdefDisableCommands\@gobbletwo
6654 \let\texorpdfstring\@firstoftwo
6655 \let\pdfbookmark\@undefined
6656 \newcommand\pdfbookmark[3]{}
6657 \let\phantomsection\@empty
6658 \let\hypersetup\@gobble
6659 \let\hyperbaseurl\@gobble
6660 \newcommand*{\href}[3]{}
6661 \let\hyperdef\@gobbletwo
6662 \let\hyperlink\@gobble
6663 \let\hypertarget\@gobble
6664 \def\hyperref{%
6665   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6666 }
6667 \long\def\@gobbleopt[#1]{}
6668 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6669 \LetLtxMacro\NoHy@OrgRef\ref
6670 \DeclareRobustCommand*\ref{%
6671   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6672 }
6673 \LetLtxMacro\NoHy@OrgPageRef\pageref
6674 \DeclareRobustCommand*\pageref{%
6675   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6676 }
6677 \let\hyperref

```

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}`

```

6678 \*package
6679 \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.

```

6680 \if@filesw
6681   \ifHy@typexml
6682     \immediate\closeout\@mainaux
6683     \immediate\openout\@mainaux\jobname.aux\relax
6684     \immediate\write\@auxout{<relaxxml>\relax}%

```

```

6685 \fi
6686 \immediate\write\@auxout{%
6687 \string\providecommand\string\HyperFirstAtBeginDocument{%
6688 \string\AtBeginDocument}^^J%
6689 \string\HyperFirstAtBeginDocument{%
6690 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6691 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6692 \string\gdef\string\contentsline%
6693 \string#1\string#2\string#3\string#4{%
6694 \string\oldcontentsline%
6695 {\string#1}{\string#2}{\string#3}}^^J%
6696 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6697 \string\gdef\string\newlabel\string#1\string#2{%
6698 \string\newlabelxx{\string#1}\string#2}^^J%
6699 \string\gdef\string\newlabelxx%
6700 \string#1\string#2\string#3\string#4\string#5\string#6{%
6701 \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.

```

6702 \string\AtEndDocument{%
6703 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6704 \string\let\string\contentsline\string\oldcontentsline^^J%
6705 \string\let\string\newlabel\string\oldnewlabel^^J%
6706 \string\fi%
6707 }^^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.

```

6708 \string\fi%
6709 }^^J%
6710 \string\global\string\let\string\hyper@last\relax^^J%
6711 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6712 }%
6713 \fi
6714 \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.

```

6715 \ifx\hyper@last\@undefined
6716 \def\@starttoc#1{%
6717 \begingroup
6718 \makeatletter
6719 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6720 \IfFileExists{\jobname.#1}{%
6721 \Hy@WarningNoLine{%
6722 old #1 file detected, not used; run LaTeX again%
6723 }%
6724 }{}%
6725 \if@filesw
6726 \expandafter\newwrite\csname tf@#1\endcsname
6727 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6728 \fi
6729 \@nobreakfalse
6730 \endgroup

```

```

6731 }%
6732 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}{-}}%
6733 \fi
6734 }

```

26 Title strings

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

```

6735 \ifHy@pdfusetitle
6736 \let\HyOrg@title\title
6737 \let\HyOrg@author\author
6738 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6739 \def\Hy@scanopttitle[#1]{%
6740 \gdef\Hy@title{#1}%
6741 \HyOrg@title{#1}%
6742 }%
6743 \def\Hy@scantitle#1{%
6744 \gdef\Hy@title{#1}%
6745 \HyOrg@title{#1}%
6746 }%
6747 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6748 \def\Hy@scanoptauthor[#1]{%
6749 \gdef\Hy@author{#1}%
6750 \HyOrg@author{#1}%
6751 }%
6752 \def\Hy@scanauthor#1{%
6753 \gdef\Hy@author{#1}%
6754 \HyOrg@author{#1}%
6755 }%

```

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.

```

6756 \begingroup
6757 \def\process@me#1\@nil#2{%
6758 \expandafter\let\expandafter\x\csname @#2\endcsname
6759 \edef\y{\expandafter\strip@prefix\meaning\x}%
6760 \def\c##1#1##2\@nil{%
6761 \ifx\\##1\\%
6762 \else
6763 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6764 \expandafter{\x}%
6765 \fi
6766 }%
6767 \expandafter\c\y\relax#1\@nil
6768 }%
6769 \expandafter\process@me\string\@latex@\@nil{title}%
6770 \expandafter\process@me\string\@latex@\@nil{author}%
6771 \endgroup
6772 \fi
6773 \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.

```

6774 \def\Hy@UseMaketitleString#1{%
6775   \ltx@ifundefined{Hy@#1}{-}{%
6776     \begingroup
6777       \let\Hy@saved@hook\pdfstringdefPreHook
6778       \pdfstringdefDisableCommands{%
6779         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6780         \let\newline\\%
6781       }%
6782       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6783         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6784           \csname Hy@#1\endcsname\@empty
6785         }%
6786       \fi
6787       \global\let\pdfstringdefPreHook\Hy@saved@hook
6788     \endgroup
6789   }%
6790 }
6791 \def\Hy@newline@title#1{ #1}
6792 \def\Hy@newline@author#1{, #1}
6793 \def\Hy@UseMaketitleInfos{%
6794   \Hy@UseMaketitleString{title}%
6795   \Hy@UseMaketitleString{author}%
6796 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6797 \RequirePackage{atbegshi}[2007/09/09]
6798 \let\Hy@EveryPageHook\ltx@empty
6799 \let\Hy@EveryPageBoxHook\ltx@empty
6800 \let\Hy@FirstPageHook\ltx@empty
6801 \AtBeginShipout{%
6802   \Hy@EveryPageHook
6803   \ifx\Hy@EveryPageBoxHook\ltx@empty
6804     \else
6805       \setbox\AtBeginShipoutBox=\vbox{%
6806         \offinterlineskip
6807         \Hy@EveryPageBoxHook
6808         \box\AtBeginShipoutBox
6809       }%
6810     \fi
6811 }
6812 \ltx@iffileloaded{hpdftex.def}{%
6813   \AtBeginShipout{%
6814     \Hy@FirstPageHook
6815     \global\let\Hy@FirstPageHook\ltx@empty
6816   }%

```

```

6817 }{%
6818   \AtBeginShipoutFirst{%
6819     \Hy@FirstPageHook
6820   }%
6821 }
6822 \g@addto@macro\Hy@FirstPageHook{%
6823   \PDF@FinishDoc
6824   \global\let\PDF@FinishDoc\ltx@empty
6825 }

```

28.1 PDF /PageLabels

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

```

6826 \ifHy@pdfpagelabels
6827   \begingroup\expandafter\expandafter\expandafter\endgroup
6828   \expandafter\ifx\csname thepage\endcsname\relax
6829     \Hy@pdfpagelabelsfalse
6830     \Hy@WarningNoLine{%
6831       Option 'pdfpagelabels' is turned off\MessageBreak
6832       because \string\thepage\space is undefined%
6833     }%
6834     \csname fi\endcsname
6835     \csname iffalse\expandafter\endcsname
6836     \fi

```

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

```

6837 \def\thispdfpagelabel#1{%
6838   \gdef\HyPL@thisLabel{#1}%
6839 }%
6840 \global\let\HyPL@thisLabel\relax

```

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

```

6841 \let\HyPL@Labels\ltx@empty

```

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

```

6842 \newcount\Hy@abspage
6843 \Hy@abspage=0 %

```

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

```

6844 \def\HyPL@LastType{init}%
6845 \def\HyPL@LastNumber{0}%
6846 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6847 \def\HyPL@arabic{D}%
6848 \def\HyPL@Roman{R}%
6849 \def\HyPL@roman{r}%
6850 \def\HyPL@Alph{A}%
6851 \def\HyPL@alph{a}%
6852 \let\HyPL@SlidesSetPage\ltx@empty
6853 \ltx@ifclassloaded{slides}{%
6854   \def\HyPL@SlidesSetPage{%
6855     \advance\c@page\ltx@one
6856     \ifnum\value{page}>\ltx@one
6857       \protected@edef\HyPL@SlidesOptionalPage{%

```

```

6858     \Hy@SlidesFormatOptionalPage{\thepage}%
6859   }%
6860 \else
6861   \let\HyPL@SlidesOptionalPage\ltx@empty
6862 \fi
6863 \advance\c@page-\ltx@one
6864 \def\HyPL@page{%
6865   \csname the\Hy@SlidesPage\endcsname
6866   \HyPL@SlidesOptionalPage
6867 }%
6868 }%
6869 }{}%

```

`\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.

```

6870 \def\HyPL@EveryPage{%
6871   \begingroup
6872   \ifx\HyPL@thisLabel\relax
6873     \let\HyPL@page\thepage
6874     \HyPL@SlidesSetPage
6875   \else
6876     \let\HyPL@page\HyPL@thisLabel
6877     \global\let\HyPL@thisLabel\relax
6878   \fi
6879   \let\HyPL@Type\relax
6880   \ifnum\c@page>0 %
6881     \ifx\HyPL@SlidesSetPage\ltx@empty
6882       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6883     \fi
6884   \fi
6885   \let\Hy@temp Y%
6886   \ifx\HyPL@Type\HyPL@LastType
6887   \else
6888     \let\Hy@temp N%
6889   \fi
6890   \ifx\HyPL@Type\relax
6891     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6892   \else
6893     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6894   \fi
6895   \ifx\HyPL@Prefix\HyPL@LastPrefix
6896   \else
6897     \let\Hy@temp N%
6898   \fi
6899   \if Y\Hy@temp
6900     \advance\c@page by -1 %
6901     \ifnum\HyPL@LastNumber=\the\c@page\relax
6902     \else
6903       \let\Hy@temp N%
6904     \fi
6905     \Hy@StepCount\c@page
6906   \fi
6907   \if N\Hy@temp
6908     \ifx\HyPL@Type\relax
6909       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6910     \else
6911       \HyPL@StorePageLabel{%

```

```

6912     \ifx\HyPL@Prefix\@empty
6913     \else
6914       /P(\HyPL@Prefix)%
6915     \fi
6916     /S/\csname HyPL\HyPL@Type\endcsname
6917     \ifnum\the\c@page=1 %
6918     \else
6919       \space/St \the\c@page
6920     \fi
6921   }%
6922 \fi
6923 \fi
6924 \xdef\HyPL@LastNumber{\the\c@page}%
6925 \global\let\HyPL@LastType\HyPL@Type
6926 \global\let\HyPL@LastPrefix\HyPL@Prefix
6927 \endgroup
6928 \Hy@GlobalStepCount\Hy@abspage
6929 }%

```

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

```

6930 \def\HyPL@CheckThePage#1\@nil{%
6931   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6932 }%

```

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

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

```

6933 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6934   \def\Hy@tempa{#4}%
6935   \def\Hy@tempb{\csname\endcsname\c@page}%
6936   \ifx\Hy@tempa\Hy@tempb
6937     \expandafter\ifx\csname HyPL#3\endcsname\relax
6938     \else
6939       \def\HyPL@Type{#3}%
6940       \def\HyPL@Prefix{#2}%
6941     \fi
6942   \else
6943     \begingroup
6944     \let\Hy@next\endgroup
6945     \let\HyPL@found\@undefined
6946     \def\arabic{\HyPL@Format{arabic}}%
6947     \def\Roman{\HyPL@Format{Roman}}%
6948     \def\roman{\HyPL@Format{roman}}%
6949     \def\Alph{\HyPL@Format{Alph}}%
6950     \def\alph{\HyPL@Format{alph}}%
6951     \protected@edef\Hy@temp{#1}%
6952     \ifx\HyPL@found\relax
6953       \toks@{\expandafter{\Hy@temp}}%
6954       \edef\Hy@next{\endgroup
6955         \noexpand\HyPL@@@CheckThePage\the\toks@
6956         \noexpand\HyPL@found\relax\noexpand\@nil
6957       }%
6958     \fi
6959     \Hy@next
6960 \fi

```

6961 }%

`\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`.

```

6962 \def\HyPL@Format#1#2{%
6963   \ifx\HyPL@found\@undefined
6964     \expandafter\ifx\csname c@#2\endcsname\c@page
6965       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6966     \else
6967       \expandafter\noexpand\csname#1\endcsname{#2}%
6968     \fi
6969   \else
6970     \expandafter\noexpand\csname#1\endcsname{#2}%
6971   \fi
6972 }%
```

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

```

6973 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6974   \def\Hy@tempa{#3}%
6975   \def\Hy@tempb{\HyPL@found\relax}%
6976   \ifx\Hy@tempa\Hy@tempb
6977     \def\HyPL@Type{#2}%
6978     \def\HyPL@Prefix{#1}%
6979   \fi
6980 }%
```

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

```

6981 \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`.

```

6982 \def\HyPL@Useless{0<</S/D>>}%
6983 \@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.

```

6984 \def\HyPL@SetPageLabels{%
6985   \@onelevel@sanitize\HyPL@Labels
6986   \ifx\HyPL@Labels\@empty
6987   \else
6988     \ifx\HyPL@Labels\HyPL@Useless
6989     \else
6990       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6991     \fi
6992   \fi
6993 }%
```

```

6994 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6995 \fi
```

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

```

6996 \Hy@DisableOption{pdfpagelabels}
6997 \</package>
```

28.1.1 pdfTeX and VTeX

Because of pdfTeX's `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
6998 <*pdfTeX>
6999 \pdf@ifdraftmode{%
7000   \let\Hy@PutCatalog\ltx@gobble
7001 }{%
7002   \let\Hy@PutCatalog\pdfcatalog
7003 }
7004 </pdfTeX>
```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```
7005 <*vTeX>
7006 \providecommand*\XR@ext}{pdf}
7007 \edef\Hy@VTeXversion{%
7008   \ifx\VTeXversion\@undefined
7009     \z@
7010   \else
7011     \ifx\VTeXversion\relax
7012       \z@
7013     \else
7014       \VTeXversion
7015     \fi
7016   \fi
7017 }
7018 \begingroup
7019   \ifnum\Hy@VTeXversion<660 %
7020     \gdef\Hy@PutCatalog#1{%
7021       \Hy@WarningNoLine{%
7022         VTeX 6.59g or above required for pdfpagelabels%
7023       }%
7024     }%
7025   \else
7026     \gdef\Hy@PutCatalog#1{%
7027       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7028     }%
7029     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7030       \ifx\#2\%
7031         \else
7032           \immediate\special{!pdfpagelabels #2}%
7033         \fi
7034       }%
7035     \fi
7036 \endgroup
7037 </vTeX>

7038 <*pdfTeX | vTeX>
```

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

```
7039 \ifHy@pdfpagelabels
7040   \def\HyPL@StorePageLabel#1{%
```

```

7041 \toks@\expandafter{\HyPL@Labels}%
7042 \xdef\HyPL@Labels{%
7043 \the\toks@
7044 \the\Hy@abspage<<#1>>%
7045 }%
7046 }%

```

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.

```

7047 \RequirePackage{atveryend}[2009/12/07]%
7048 \AtVeryEndDocument{%
7049 \HyPL@SetPageLabels
7050 }%

7051 \fi
7052 </pdfTeX | vtex>

```

28.1.2 xetex

```

7053 < *xetex>
7054 \HyPsd@LoadUnicode
7055 \Hy@unicodetrue
7056 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7057 \else
7058 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7059 \fi
7060 \HyPsd@LoadStringEncoding
7061 \define@key{Hyp}{unicode}[true]{%
7062 \Hy@boolkey{unicode}{#1}%
7063 \ifHy@unicode
7064 \else
7065 \Hy@Warning{%
7066 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
7067 option setting 'unicode=false'%
7068 }%
7069 \Hy@unicodetrue
7070 \fi
7071 }
7072 \define@key{Hyp}{pdfencoding}{%
7073 \edef\HyPsd@temp{#1}%
7074 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7075 \let\HyPsd@pdfencoding\HyPsd@temp
7076 \else
7077 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7078 \let\HyPsd@pdfencoding\HyPsd@temp
7079 \else
7080 \Hy@Warning{%
7081 XeTeX driver only supports\MessageBreak
7082 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7083 setting 'pdfencoding=\HyPsd@temp'%
7084 }%
7085 \fi
7086 \fi
7087 }
7088 \let\HyXeTeX@CheckUnicode\relax
7089 </xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7090 <*pdfmarkbase>
7091 \begingroup
7092 \ifundefined{headerps@out}{-}{%
7093   \toks@ \expandafter{\Hy@FirstPageHook}%
7094   \xdef\Hy@FirstPageHook{%
7095     \noexpand\headerps@out{%
7096       systemdict /pdfmark known%
7097       {%
7098         userdict /?pdfmark systemdict /exec get put%
7099       }{%
7100         userdict /?pdfmark systemdict /pop get put %
7101         userdict /pdfmark systemdict /cleartomark get put%
7102       }%
7103       ifelse%
7104     }%
7105     \the\toks@
7106   }%
7107 }%
7108 \endgroup
7109 </pdfmarkbase>

```

\Hy@PutCatalog

```

7110 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
7111 <*pdfmarkbase>
7112 \def\Hy@PutCatalog#1{%
7113   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7114 }
7115 </pdfmarkbase>

7116 <*pdfmarkbase | dvipdfm | xetex>
7117 \ifHy@pdfpagelabels

```

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

```

7118 \def\HyPL@StorePageLabel#1{%
7119   \if@files
7120     \begingroup
7121     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7122     \immediate\write\@mainaux{%
7123       \string\HyPL@Entry{\Hy@tempa}%
7124     }%
7125     \endgroup
7126   \fi
7127 }%

```

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.

```

7128 \Hy@AtBeginDocument{%
7129   \if@files
7130     \immediate\write\@mainaux{%
7131       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7132     }%
7133   \fi
7134   \ifx\HyPL@Labels\@empty
7135     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7136   \else

```

```

7137 \HyPL@SetPageLabels
7138 \fi
7139 \let\HyPL@Entry\@gobble
7140 }%

\HyPL@Entry
7141 \def\HyPL@Entry#1{%
7142 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7143 \HyPL@Labels
7144 #1%
7145 }%
7146 }%

7147 \fi
7148 </pdfmarkbase | dvipdfm | xetex>

7149 <*package>

7150 \ifx\MaybeStopEarly\relax
7151 \else
7152 \Hy@stoppedeearlytrue
7153 \expandafter\MaybeStopEarly
7154 \fi
7155 \Hy@stoppedeearlyfalse

```

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

```

7156 \def\Hy@CounterExists#1{%
7157 \begingroup\expandafter\expandafter\expandafter\endgroup
7158 \expandafter\ifx\csname c@#1\endcsname\relax
7159 \expandafter\@gobble
7160 \else
7161 \begingroup\expandafter\expandafter\expandafter\endgroup
7162 \expandafter\ifx\csname the#1\endcsname\relax
7163 \expandafter\expandafter\expandafter\@gobble
7164 \else
7165 \expandafter\expandafter\expandafter\@firstofone
7166 \fi

```

```

7167 \fi
7168 }
7169 \Hy@CounterExists{section}{%
7170 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7171 }
7172 \Hy@CounterExists{part}{%
7173 \providecommand\theHpart{\arabic{part}}}%
7174 }
7175 \ltx@ifundefined{thechapter}{%
7176 \providecommand\theHsection {\arabic{section}}}%
7177 \providecommand\theHfigure {\arabic{figure}}}%
7178 \providecommand\theHtable {\arabic{table}}}%
7179 }{%
7180 \providecommand\theHchapter {\arabic{chapter}}}%
7181 \providecommand\theHfigure {\theHchapter.\arabic{figure}}}%
7182 \providecommand\theHtable {\theHchapter.\arabic{table}}}%
7183 \providecommand\theHsection {\theHchapter.\arabic{section}}}%
7184 }
7185 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7186 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7187 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
7188 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7189 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
7190 \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.

```

7191 \let\H@item\item
7192 \newcounter{Item}
7193 \def\theHItem{\arabic{Item}}
7194 \def\item{%
7195 \@hyper@itemfalse
7196 \if@nmbbrlist\@hyper@itemtrue\fi
7197 \H@item
7198 }
7199 \providecommand\theHenumi {\theHItem}
7200 \providecommand\theHenumii {\theHItem}
7201 \providecommand\theHenumiii {\theHItem}
7202 \providecommand\theHenumiv {\theHItem}
7203 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7204 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7205 \@ifundefined{theHHmpfootnote}{%
7206 \let\theHHmpfootnote\theHHfootnote
7207 }{}

```

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.

```

7208 \let\H@refstepcounter\refstepcounter
7209 \edef\name@of@eq{equation}%
7210 \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.

```

7211 \newif\if@hyper@item
7212 \newif\if@skiphyperref

```

```

7213 \@hyper@itemfalse
7214 \@skiphyperrfalse
7215 \def\refstepcounter#1{%
7216   \ifHy@pdfstring
7217   \else
7218     \H@refstepcounter{#1}%
7219     \edef\This@name{#1}%
7220     \ifx\This@name\name@of@slide
7221     \else
7222       \if@skiphyperr
7223       \else
7224         \if@hyper@item
7225         \stepcounter{Item}%
7226         \hyper@refstepcounter{Item}%
7227         \@hyper@itemfalse
7228       \else
7229         \hyper@refstepcounter{#1}%
7230       \fi
7231     \fi
7232   \fi
7233 \fi
7234 }
7235 \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.

```

7236 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7237 \def\hyper@refstepcounter#1{%
7238   \edef\This@name{#1}%
7239   \ifx\This@name\name@of@eq
7240   \@ifundefined{theHequation}{%
7241     \make@stripped@name{\theequation}%
7242     \let\theHequation\newname
7243   }{}%
7244   \fi
7245   \HyCnt@ProvideTheHCounter{#1}%
7246   \hyper@makecurrent{#1}%
7247   \ifmeasuring@
7248   \else
7249     \Hy@raisedlink{%
7250       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7251     }%
7252   \fi
7253 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@ckpt`, the clear counter list of the artificial counter `@ckpt`, \LaTeX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because \LaTeX , substring search `\in@` can be used.

```

7254 \def\HyCnt@ProvideTheHCounter#1{%
7255   \@ifundefined{theH#1}{%

```

```

7256 \expandafter\def\csname theH#1\endcsname{%
7257 \def\Hy@temp{\@elt{#1}}%
7258 \ltx@onelevel@sanitize\Hy@temp
7259 \let\HyOrg@elt\@elt
7260 \edef\@elt{%
7261 \noexpand\HyCnt@LookForParentCounter
7262 \expandafter\noexpand\csname theH#1\endcsname
7263 }%
7264 \cl@@ckpt
7265 \let\@elt\HyOrg@elt
7266 \expandafter
7267 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7268 \expandafter{%
7269 \expandafter\@arabic\csname c@#1\endcsname
7270 }%
7271 }{}%
7272 }

```

\Hy@LookForParentCounter

```

7273 \def\HyCnt@LookForParentCounter#1#2{%
7274 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7275 \ltx@ifundefined{cl@#2}{%
7276 }{%
7277 \ltx@onelevel@sanitize\Hy@temp@A
7278 \edef\Hy@temp@A{%
7279 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7280 }\Hy@temp@A
7281 \ifin@
7282 \ltx@ifundefined{theH#2}{%
7283 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7284 \expandafter{%
7285 \expandafter\@arabic\csname c@#2\endcsname.%
7286 }%
7287 }{%
7288 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7289 \expandafter{%
7290 \csname theH#2\endcsname.%
7291 }%
7292 }%
7293 \fi
7294 }%
7295 }

```

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`.

```

7296 \begingroup\expandafter\expandafter\expandafter\endgroup
7297 \expandafter\ifx\csname chapter\endcsname\relax
7298 \def\Hy@chapterstring{section}%
7299 \else
7300 \def\Hy@chapterstring{chapter}%
7301 \fi
7302 \def\Hy@appendixstring{appendix}
7303 \def\Hy@chapapp{\Hy@chapterstring}

```

```

7304 \ltx@ifundefined{appendix}{%
7305 }{%
7306 \let\HyOrg@appendix\appendix
7307 \def\Hy@AlphNoErr#1{%
7308 \ifnum\value{#1}>26 %
7309 Alph\number\value{#1}%
7310 \else
7311 \ifnum\value{#1}<1 %
7312 Alph\number\value{#1}%
7313 \else
7314 \Alph{#1}%
7315 \fi
7316 \fi
7317 }%
7318 \def\appendix{%
7319 \ltx@ifundefined{chapter}{%
7320 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7321 }{%
7322 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7323 }%
7324 \xdef\Hy@chapapp{\Hy@appendixstring}%
7325 \HyOrg@appendix
7326 }%
7327 }

```

\Hy@Test@alph

```

7328 \def\Hy@Test@alph#1{%
7329 \ifcase#1\or
7330 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7331 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7332 u\or v\or w\or x\or y\or z%
7333 \else
7334 \@ctrerr
7335 \fi
7336 }

```

\Hy@Test@Alph

```

7337 \def\Hy@Test@Alph#1{%
7338 \ifcase#1\or
7339 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7340 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7341 U\or V\or W\or X\or Y\or Z%
7342 \else
7343 \@ctrerr
7344 \fi
7345 }

```

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

```

7346 \def\hyper@makecurrent#1{%
7347 \begingroup
7348 \Hy@safe@activetrue
7349 \edef\Hy@param{#1}%
7350 \ifx\Hy@param\Hy@chapterstring
7351 \let\Hy@param\Hy@chapapp
7352 \fi
7353 \ifHy@hypertextnames

```

```

7354 \let\@number\@firstofone
7355 \def\@fnsymbol##1{fnsymbol\number##1}%
7356 \def\@arabic##1{\number##1}%
7357 \ifx\@alph\Hy@Test@alph
7358 \else
7359 \def\@alph{alph\number}%
7360 \fi
7361 \ifx\@Alph\Hy@Test@Alph
7362 \else
7363 \def\@Alph{Alph\number}%
7364 \fi
7365 \ifHy@naturalnames
7366 \let\textlatin\@firstofone
7367 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7368 \else
7369 \xdef\HyperGlobalCurrentHref{%
7370 \csname
7371 the%
7372 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7373 #1%
7374 \endcsname
7375 }%
7376 \fi
7377 \xdef\HyperGlobalCurrentHref{%
7378 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7379 }%
7380 \else
7381 \Hy@GlobalStepCount\Hy@linkcounter
7382 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7383 \fi
7384 \endgroup
7385 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7386 \ifHy@localanchorname
7387 \let\@currentHref\HyperLocalCurrentHref
7388 \else
7389 \global\let\@currentHref\HyperGlobalCurrentHref
7390 \fi
7391 }

```

\Hy@MakeCurrentHref

```

7392 \def\Hy@MakeCurrentHref#1{%
7393 \edef\HyperLocalCurrentHref{#1}%
7394 \@onelevel@sanitize\HyperLocalCurrentHref
7395 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7396 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7397 \ifHy@localanchorname
7398 \let\@currentHref\HyperLocalCurrentHref
7399 \else
7400 \global\let\@currentHref\HyperGlobalCurrentHref
7401 \fi
7402 }

```

\Hy@MakeCurrentHrefAuto

```

7403 \def\Hy@MakeCurrentHrefAuto#1{%
7404 \Hy@GlobalStepCount\Hy@linkcounter
7405 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7406 }

```

```

\@currentHlabel \@currentHlabel is only defined for compatibility with package ‘hypdvips’.
7407 \def\@currentHlabel{\@currentHref}

7408 \@ifpackageloaded{fancyvrb}{%
7409   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
7410   \def\FV@StepLineNo{%
7411     \FV@SetLineNo
7412     \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}}%
7413   \FV@StepLineNo
7414 }%
7415 }%
7416 }{}

```

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
7417 \Hy@AtBeginDocument{%
7418   \@ifclassloaded{revtex4}{-}{-}%
7419   \@namedef{ver@lastpage.sty}{1994/06/25}%
7420 }{}%
7421 \@ifpackageloaded{lastpage}{%
7422   \ifHy@pageanchor
7423   \else
7424     \Hy@WarningNoLine{%
7425       The \string\pageref{LastPage} link doesn't work\MessageBreak
7426       with disabled option ‘pageanchor’%
7427     }%
7428   \fi
7429   \def\lastpage@putlabel{%
7430     \addtocounter{page}{-1}%
7431     \if@filesw
7432       \begingroup
7433       \let\@number\@firstofone
7434       \ifHy@pageanchor
7435         \ifHy@hypertexnames
7436           \ifHy@plainpages
7437             \def\Hy@temp{\arabic{page}}%
7438           \else
7439             \Hy@unicodedefalse
7440             \pdfstringdef\Hy@temp{\thepage}%
7441           \fi
7442         \else
7443           \def\Hy@temp{\the\Hy@pagecounter}%
7444         \fi
7445       \fi
7446       \immediate\write\@auxout{%
7447         \string\newlabel
7448         {LastPage}{-}{\thepage}{-}%

```

```

7449         \ifHy@pageanchor page.\Hy@temp\fi}{}}%
7450     }%
7451 \endgroup
7452 \fi
7453 \addtocounter{page}{1}%
7454 }%
7455 \@ifclassloaded{revtex4}{%
7456 \begingroup
7457 \toks@{\expandafter{\lastpage@putlabel}}%
7458 \edef\x{\endgroup
7459 \def\noexpand\lastpage@putlabel{%
7460 \noexpand\stepcounter{page}%
7461 \the\toks@
7462 \noexpand\addtocounter{page}\noexpand\m@ne
7463 }%
7464 }%
7465 \x
7466 }{}%
7467 }{}%
7468 }
7469 \</package>
7470 \<*check>
7471 \checkpackage{lastpage}[1994/06/25]
7472 \checkcommand\def\lastpage@putlabel{%
7473 \addtocounter{page}{-1}%
7474 \immediate\write\@auxout{%
7475 \string\newlabel{LastPage}{{}\{\thepage}}}%
7476 }%
7477 \addtocounter{page}{1}%
7478 }
7479 \</check>
7480 \<*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.

```

7481 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7482 \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:

```

7483 \@ifpackageloaded{titlesec}{%
7484 \def\ttl@Hy@steplink#1{%
7485 \Hy@MakeCurrentHrefAuto{#1*}%
7486 \edef\ttl@Hy@saveanchor{%
7487 \noexpand\Hy@raisedlink{%
7488 \noexpand\hyper@anchorstart{\@currentHref}%
7489 \noexpand\hyper@anchorend
7490 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7491 \noexpand\ttl@Hy@PatchSaveWrite
7492 }%

```

```

7493 }%
7494 }%
7495 \def\ttl@Hy@PatchSaveWrite{%
7496   \begingroup
7497   \toks@{\expandafter{\ttl@savewrite}}%
7498   \edef\x{\endgroup
7499     \def\noexpand\ttl@savewrite{%
7500       \let\noexpand\@currentHref
7501       \noexpand\ttl@Hy@SavedCurrentHref
7502       \the\toks@
7503     }%
7504   }%
7505   \x
7506 }%
7507 \def\ttl@Hy@refstepcounter#1{%
7508   \let\ttl@b\Hy@raisedlink
7509   \def\Hy@raisedlink##1{%
7510     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7511   }%
7512   \refstepcounter{#1}%
7513   \let\Hy@raisedlink\ttl@b
7514 }%
7515 }{}

Package titletoc support:
7516 \ifpackageloaded{titletoc}{%
7517   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7518 }{}

```

33 Package varioref support

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

```

7519 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
7520 \ifpackageloaded{varioref}{%
7521   \def\vref@pagenum#1#2{%
7522     \@ifundefined{r@#2}{%
7523       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7524     }{}%
7525     \edef#1{\getpagerefnumber{#2}}%
7526   }%
7527 }{}

```

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

```

7528 \def\Hy@varioref@refstepcounter#1{%
7529   \stepcounter{#1}%
7530   \protected@edef\@currentlabel{%
7531     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7532   }%
7533 }
7534 \AtBeginDocument{%
7535   \ifx\refstepcounter\Hy@varioref@refstepcounter
7536     \let\H@refstepcounter\refstepcounter
7537     \let\refstepcounter\Hy@saved@refstepcounter
7538   \fi
7539 }

```

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

```

7540 \ifpackageloaded{longtable}{%
7541   \begingroup
7542   \def\y{\LT@array}%
7543   \@ifundefined{scr@LT@array}{%
7544     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7545       \def\y{\scr@LT@array}}%
7546   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7547     \expandafter\endgroup
7548     \expandafter\def\y[##1]##2{%
7549       \H@refstepcounter{#1}%
7550       \hyper@makecurrent{table}%
7551       \let\Hy@LT@currentHref\@currentHref
7552       #2\@sharp###4%
7553     }%
7554   }%
7555   \expandafter\expandafter\expandafter\x\y[#{1}]{#2}\@nil

```

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

```

7556 \begingroup
7557   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7558   \endgroup
7559   \def\LT@start{%
7560     #1%
7561     \ifvoid\LT@foot#2\fi
7562     \let\@currentHref\Hy@LT@currentHref
7563     \Hy@raisedlink{%
7564       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7565     }%
7566     #3%
7567   }%
7568 }%
7569 \expandafter\x\LT@start\@nil
7570 }{}

```

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.

```

7571 \let\new@refstepcounter\refstepcounter
7572 \let\H@equation\equation
7573 \let\H@endequation\endequation
7574 \@ifpackageloaded{amsmath}{%
7575   \long\def\Hy@temp{%
7576     \incr@eqnum
7577     \mathdisplay@push

```

```

7578 \st@rredfalse \global\@eqnswtrue
7579 \mathdisplay{equation}%
7580 }%
7581 \ifx\Hy@temp\equation
7582 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7583 \csname iftrue\endcsname
7584 \else
7585 \long\def\equation{%
7586 \mathdisplay@push
7587 \st@rredfalse \global\@eqnswtrue
7588 \mathdisplay{equation}%
7589 \incr@eqnum
7590 }%
7591 \fi
7592 \fi
7593 }{%
7594 \def\equation{%
7595 \let\refstepcounter\H@refstepcounter
7596 \H@equation
7597 \@ifundefined{theHequation}{%
7598 \make@stripped@name{\theequation}%
7599 \let\theHequation\newname
7600 }{}%
7601 \hyper@makecurrent{equation}%

```

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

```

7602 \mathopen{%
7603 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7604 }%
7605 \let\refstepcounter\new@refstepcounter
7606 }%
7607 \def\endequation{%
7608 \ifx\Hy@raisedlink\ltx@empty
7609 \hyper@anchorend
7610 \else
7611 \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7612 \fi
7613 \H@endequation
7614 }%
7615 }

```

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.

```

7616 \newif\if@eqnstar
7617 \@eqnstarfalse
7618 \let\H@eqnarray\eqnarray
7619 \let\H@endeqnarray\endeqnarray
7620 \def\eqnarray{%
7621 \let\Hy@reserved@a\relax
7622 \def\@currentHref{}%
7623 \H@eqnarray
7624 \if@eqnstar
7625 \else
7626 \ifx\\\@currentHref\\%
7627 \else

```

```

7628 \ifundefined{theHequation}{%
7629 \make@stripped@name{\theequation}%
7630 \let\theHequation\newname
7631 }{}%
7632 \hyper@makecurrent{equation}%
7633 \mathopen{%
7634 \Hy@raisedlink{%
7635 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7636 }%
7637 }%
7638 \fi
7639 \fi
7640 }
7641 \def\endeqnarray{%
7642 \H@endeqnarray
7643 }

```

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.

```

7644 \@namedef{eqnarray*}{%
7645 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7646 }
7647 \@namedef{endeqnarray*}{%
7648 \nonumber\endeqnarray\@eqnstarfalse
7649 }

```

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

```

7650 \ltx@ifundefined{subeqnarray}{}{%
7651 \let\H@subeqnarray\subeqnarray
7652 \let\H@endsubeqnarray\endsubeqnarray
7653 \def\subeqnarray{%
7654 \let\Hy@reserved@a\relax
7655 \H@subeqnarray
7656 \@ifundefined{theHequation}{%
7657 \make@stripped@name{\theequation}%
7658 \let\theHequation\newname
7659 }{}%
7660 \hyper@makecurrent{equation}%
7661 \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
7662 }%
7663 \def\endsubeqnarray{%
7664 \H@endsubeqnarray
7665 }%
7666 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7667 }

```

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

```

7668 \def\make@stripped@name#1{%
7669 \begingroup
7670 \escapechar\m@ne
7671 \global\let\newname\@empty
7672 \protected@edef\Hy@tempa{#1}%
7673 \edef\@tempb{%
7674 \noexpand\@tfor\noexpand\Hy@tempa:=%
7675 \expandafter\strip@prefix\meaning\Hy@tempa

```

```

7676 }%
7677 \@tempb\do{%
7678   \if{\Hy@tempa\else
7679     \if{\Hy@tempa\else
7680       \xdef\newname{\newname\Hy@tempa}%
7681     \fi
7682   \fi
7683 }%
7684 \endgroup
7685 }

```

Support for amsmath's subequations:

```

7686 \begingroup\expandafter\expandafter\expandafter\endgroup
7687 \expandafter\ifx\csname subequations\endcsname\relax
7688 \else
7689   \let\HyOrg@subequations\subequations
7690   \def\subequations{%
7691     \stepcounter{equation}%
7692     \protected@edef\theHparentequation{%
7693       \ifundefined{theHequation}\theequation\theHequation
7694     }%
7695     \addtocounter{equation}{-1}%
7696     \HyOrg@subequations
7697     \def\theHequation{\theHparentequation\alph{equation}}%
7698     \ignorespaces
7699   }%
7700 \fi

```

Support for package `amsthm` (Daniel Müllner):

```

7701 \Hy@AtBeginDocument{%
7702 \@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

7703 \def\Hy@temp#1#2#3{%
7704   \ifhmode\unskip\unskip\par\fi
7705   \normalfont
7706   \trivlist
7707   \let\thmheadnl\relax
7708   \let\thm@swap\@gobble
7709   \let\thm@indent\indent % indent
7710   \thm@headfont{\scshape}% heading font small caps
7711   \thm@notefont{\fontseries\mddefault\upshape}%
7712   \thm@headpunct{.}% add period after heading
7713   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7714   \thm@space@setup
7715   #1% style overrides
7716   \@topsep \thm@preskip % used by thm head
7717   \@topsepadd \thm@postskip % used by \@endparenv
7718   \def\@tempa{#2}\ifx\@empty\@tempa
7719     \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7720   \else
7721     \refstepcounter{#2}%
7722     \def\@tempa{%
7723       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7724   }%

```

```

7725 \fi
7726 \@tempa
7727 }%
7728 \ifx\Hy@temp\@thm
7729 \def\@thm#1#2#3{%
7730 \ifhmode
7731 \unskip\unskip\par
7732 \fi
7733 \normalfont
7734 \trivlist
7735 \let\thmheadnl\relax
7736 \let\thm@swap\@gobble
7737 \let\thm@indent\indent % indent
7738 \thm@headfont{\scshape}% heading font small caps
7739 \thm@notefont{\fontseries\mddefault\upshape}%
7740 \thm@headpunct{.}% add period after heading
7741 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7742 \thm@space@setup
7743 #1% style overrides
7744 \@topsep \thm@preskip % used by thm head
7745 \@topsepadd \thm@postskip % used by \@endparenv
7746 \def\dth@counter{#2}%
7747 \ifx\@empty\dth@counter
7748 \def\@tempa{%
7749 \@oparg{\@begintheorem{#3}{}}[]%
7750 }%
7751 \else
7752 \H@refstepcounter{#2}%
7753 \hyper@makecurrent{#2}%
7754 \let\Hy@dth@currentHref\@currentHref
7755 \def\@tempa{%
7756 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7757 }%
7758 \fi
7759 \@tempa
7760 }%
7761 \else
7762 \def\@thm#1#2#3{%
7763 \ifhmode
7764 \unskip\unskip\par
7765 \fi
7766 \normalfont
7767 \trivlist
7768 \let\thmheadnl\relax
7769 \let\thm@swap\@gobble
7770 \thm@notefont{\fontseries\mddefault\upshape}%
7771 \thm@headpunct{.}% add period after heading
7772 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7773 \thm@space@setup
7774 #1% style overrides
7775 \@topsep \thm@preskip % used by thm head
7776 \@topsepadd \thm@postskip % used by \@endparenv
7777 \def\dth@counter{#2}%
7778 \ifx\@empty\dth@counter
7779 \def\@tempa{%
7780 \@oparg{\@begintheorem{#3}{}}[]%
7781 }%

```

```

7782 \else
7783 \H@refstepcounter{#2}%
7784 \hyper@makecurrent{#2}%
7785 \let\Hy@dth@currentHref\@currentHref
7786 \def\@tempa{%
7787 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7788 }%
7789 \fi
7790 \@tempa
7791 }%
7792 \fi
7793 \dth@everypar={%
7794 \@minipagefalse
7795 \global\@newlistfalse
7796 \@noparitemfalse
7797 \if@inlabel
7798 \global\@inlabelfalse
7799 \begingroup
7800 \setbox\z@\lastbox
7801 \ifvoid\z@
7802 \kern-\itemindent
7803 \fi
7804 \endgroup
7805 \ifx\@empty\dth@counter
7806 \else
7807 \Hy@raisedlink{%
7808 \hyper@anchorstart{%
7809 \ltx@ifundefined{Hy@dth@currentHref}%
7810 \@currentHref\Hy@dth@currentHref
7811 }\hyper@anchorend
7812 }%
7813 \fi
7814 \unhbox\@labels
7815 \fi
7816 \if@nobreak
7817 \@nobreakfalse \clubpenalty\@M
7818 \else
7819 \clubpenalty\@clubpenalty \everypar{}%
7820 \fi
7821 }%
7822 }%

```

non `amsthm` case, remove final space on line before a theorem for githib issue 11.

```

7823 {%
7824 \let\Hy@savethm\@thm
7825 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7826 }%
7827 }

```

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.

```

7828 \ifHy@hyperfootnotes
7829   \newcounter{Hfootnote}%
7830   \let\H@@footnotetext\@footnotetext
7831   \let\H@@footnotemark\@footnotemark
7832   \def\@xfootnotenext[#1]{%
7833     \begingroup
7834       \csname c@\@mpfn\endcsname #1\relax
7835       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7836     \endgroup
7837     \ifx\@footnotetext\@mpfootnotetext
7838       \expandafter\H@@mpfootnotetext
7839     \else
7840       \expandafter\H@@footnotetext
7841     \fi
7842   }%
7843   \def\@xfootnotemark[#1]{%
7844     \begingroup
7845       \c@footnote #1\relax
7846       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7847     \endgroup
7848     \H@@footnotemark
7849   }%
7850   \let\H@@mpfootnotetext\@mpfootnotetext
7851   \long\def\@mpfootnotetext#1{%
7852     \H@@mpfootnotetext{%
7853       \ifHy@nesting
7854         \expandafter\ltx@firstoftwo
7855       \else
7856         \expandafter\ltx@secondoftwo
7857       \fi
7858     }%
7859     \expandafter\hyper@@anchor\expandafter{%
7860       \Hy@footnote@currentHref
7861     }{#1}%
7862   }{%
7863     \Hy@raisedlink{%
7864       \expandafter\hyper@@anchor\expandafter{%
7865         \Hy@footnote@currentHref
7866       }{\relax}%
7867     }#1%
7868   }%
7869   }%
7870 }%
7871 \long\def\@footnotetext#1{%
7872   \H@@footnotetext{%
7873     \ifHy@nesting
7874       \expandafter\ltx@firstoftwo
7875     \else
7876       \expandafter\ltx@secondoftwo
7877     \fi
7878   }%
7879   \expandafter\hyper@@anchor\expandafter{%
7880     \Hy@footnote@currentHref
7881   }{#1}%
7882 }{%
7883   \Hy@raisedlink{%
7884     \expandafter\hyper@@anchor\expandafter{%

```

```

7885      \Hy@footnote@currentHref
7886      }{\relax}%
7887  }%
7888  \let\@currentHref\Hy@footnote@currentHref
7889  \let\@currentlabelname\@empty
7890  #1%
7891  }%
7892  }%
7893  }%

```

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.

```

7894  \def\@footnotemark{%
7895    \leavevmode
7896    \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7897    \stepcounter{Hfootnote}%
7898    \global\let\Hy@saved@currentHref\@currentHref
7899    \hyper@makecurrent{Hfootnote}%
7900    \global\let\Hy@footnote@currentHref\@currentHref
7901    \global\let\@currentHref\Hy@saved@currentHref
7902    \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7903    \@makefnmark
7904    \hyper@linkend
7905    \ifhmode\spacefactor\@x@sf\fi
7906    \relax
7907  }%

```

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

```

7908  \ifpackageloaded{tabularx}{%
7909    \let\HyOrg@TX@endtabularx\TX@endtabularx
7910    \def\Hy@tabularx@hook{%
7911      \let\@footnotetext\H@@footnotetext
7912      \let\@footnotemark\H@@footnotemark
7913      \let\@mpfootnotetext\H@@mpfootnotetext
7914    }%
7915    \begingroup
7916      \toks@\expandafter{\TX@endtabularx}%
7917      \xdef\Hy@gtemp{%
7918        \noexpand\Hy@tabularx@hook
7919        \the\toks@
7920      }%
7921    \endgroup
7922    \let\TX@endtabularx\Hy@gtemp
7923  }{}%

```

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

```

7924  \ifpackageloaded{longtable}{%
7925    \CheckCommand*{\LT@p@ftntext}[1]{%
7926      \edef\@tempa{%
7927        \the\LT@p@ftn
7928        \noexpand\footnotetext[\the\c@footnote]%

```

```

7929 }%
7930 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7931 }%
7932 \long\def\LT@p@ftntext#1{%
7933 \edef\@tempa{%
7934 \the\LT@p@ftn
7935 \begingroup
7936 \noexpand\c@footnote=\the\c@footnote\relax
7937 \noexpand\protected@xdef\noexpand\@thefnmark{%
7938 \noexpand\thempfn
7939 }%
7940 \noexpand\Hy@LT@footnotetext{%
7941 \Hy@footnote@currentHref
7942 }%
7943 }%
7944 \global\LT@p@ftn\expandafter{%
7945 \@tempa{#1}%
7946 \endgroup
7947 }%
7948 }%
7949 \long\def\Hy@LT@footnotetext#1#2{%
7950 \H@@@footnotetext{%
7951 \ifHy@nesting
7952 \hyper@@anchor{#1}{#2}%
7953 \else
7954 \Hy@raisedlink{%
7955 \hyper@@anchor{#1}{\relax}%
7956 }%
7957 \def\@currentHref{#1}%
7958 \let\@currentlabelname\@empty
7959 #2%
7960 \fi
7961 }%
7962 }%
7963 }{}%

```

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

```

7964 \@ifpackageloaded{fancyvrb}{%
7965 \def\V@@@footnotetext{%
7966 \insert\footins\bgroup
7967 \csname reset@font\endcsname
7968 \footnotesize
7969 \interlinepenalty\interfootnotelinepenalty
7970 \splittopskip\footnotesep
7971 \splitmaxdepth\dp\strutbox
7972 \floatingpenalty \@MM
7973 \hsize\columnwidth
7974 \@parboxrestore
7975 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7976 \@makefnmark}%
7977 \rule{\z@}{\footnotesep}%
7978 \bgroup
7979 \aftergroup\V@@@footnotetext
7980 \Hy@raisedlink{%
7981 \expandafter\hyper@@anchor\expandafter{%
7982 \Hy@footnote@currentHref
7983 }\relax}%
7984 }%

```

```

7985 \let\@currentHref\Hy@footnote@currentHref
7986 \let\@currentlabelname\@empty
7987 \ignorespaces
7988 }%
7989 }{}%

```

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

```

7990 \def\Hy@temp#1{%
7991 \begingroup
7992 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7993 \endgroup
7994 \@footnotemark
7995 }%
7996 \ifx\Hy@temp\footref
7997 \def\footref#1{%
7998 \begingroup
7999 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8000 \endgroup
8001 \H@@footnotemark
8002 }%
8003 \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.

```

8004 \let\HyOrg@maketitle\maketitle
8005 \def\maketitle{%
8006 \let\Hy@saved@footnotemark\@footnotemark
8007 \let\Hy@saved@footnotetext\@footnotetext
8008 \let\@footnotemark\H@@footnotemark
8009 \let\@footnotetext\H@@footnotetext
8010 \@ifnextchar[\Hy@maketitle@optarg{% ]
8011 \HyOrg@maketitle
8012 \Hy@maketitle@end
8013 }%
8014 }%
8015 \def\Hy@maketitle@optarg[#1]{%
8016 \HyOrg@maketitle[{#1}]%
8017 \Hy@maketitle@end
8018 }%
8019 \def\Hy@maketitle@end{%
8020 \ifx\@footnotemark\H@@footnotemark
8021 \let\@footnotemark\Hy@saved@footnotemark
8022 \fi
8023 \ifx\@footnotetext\H@@footnotetext
8024 \let\@footnotetext\Hy@saved@footnotetext
8025 \fi
8026 }%

```

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

```

8027 \def\realfootnote{%
8028 \@ifnextchar[\@xfootnote{%
8029 \stepcounter{\@mpfn}%
8030 \protected@xdef\@thefnmark{\thempfn}%
8031 \H@@footnotemark\H@@footnotetext
8032 }%
8033 }%

```

```

8034 \fi
8035 \Hy@DisableOption{hyperfootnotes}

8036 \endpackage
8037 \ifcheck
8038 \checklatex
8039 \checkcommand\def\@xfootnotenext[#1]{%
8040   \begingroup
8041     \csname c@\@mpfn\endcsname #1\relax
8042     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8043   \endgroup
8044   \@footnotetext
8045 }
8046 \checkcommand\def\@xfootnotemark[#1]{%
8047   \begingroup
8048     \c@footnote #1\relax
8049     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8050   \endgroup
8051   \@footnotemark
8052 }
8053 \checkcommand\def\@footnotemark{%
8054   \leavevmode
8055   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8056   \@makefnmark
8057   \ifhmode\spacefactor\@x@sf\fi
8058   \relax
8059 }
8060 \endcheck
8061 \if*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.

```

8062 \def\caption{%
8063   \ifx\@capttype\@undefined
8064     \@latex@error{\noexpand\caption outside float}\@ehd
8065     \expandafter\@gobble
8066   \else
8067     \H@refstepcounter\@capttype
8068     \let\Hy@tempa\@caption
8069     \@ifundefined{float@caption}{%
8070       }{%
8071         \expandafter\ifx\csname @float@c@\@capttype\endcsname
8072           \float@caption
8073         \let\Hy@tempa\Hy@float@caption
8074       \fi
8075     }%
8076     \expandafter\@firstofone
8077   \fi
8078   {\@dblarg{\Hy@tempa\@capttype}}}%
8079 }
8080 \long\def\caption#1[#2]#3{%
8081   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8082     \csname iftrue\endcsname
8083     \global\let\@currentHref\hc@currentHref

```

```

8084 \else
8085   \hyper@makecurrent{\@captype}%
8086 \fi
8087 \@ifundefined{NR@getttitle}{%
8088   \def\@currentlabelname{#2}%
8089 }{%
8090   \NR@getttitle{#2}%
8091 }%
8092 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8093   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8094 }%
8095 \begingroup
8096   \@parboxrestore
8097   \if@minipage
8098     \setminipage
8099   \fi
8100   \normalsize
8101   \expandafter\ifx\csname if@capstart\endcsname
8102     \csname iftrue\endcsname
8103   \global\@capstartfalse
8104   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8105 \else
8106   \@makecaption{\csname fnum@#1\endcsname}{%
8107     \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8108   \ifHy@nesting
8109     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8110   \else
8111     \Hy@raisedlink{%
8112       \expandafter\hyper@@anchor\expandafter{%
8113         \@currentHref
8114       }\relax}%
8115     }%
8116     #3%
8117   \fi
8118 }%
8119 \fi
8120 \par
8121 \endgroup
8122 }

```

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’.

```

8123 \let\Hy@float@caption\@caption
8124 \newcommand{\HyNew@float@makebox}[1]{%
8125   \HyOrg@float@makebox{%
8126     #1\relax
8127   \ifx\Hy@float@currentHref\@undefined
8128   \else
8129     \expandafter\hyper@@anchor\expandafter{%
8130       \Hy@float@currentHref
8131     }\relax}%
8132   \global\let\Hy@float@currentHref\@undefined
8133 \fi

```

```

8134 }%
8135 }%
8136 \@ifpackageloaded{float}{%
8137   \def\Hy@float@caption{%
8138     \ifx\Hy@float@currentHref\undefined
8139       \hyper@makecurrent{\@cuptype}%
8140       \global\let\Hy@float@currentHref\@currentHref
8141     \else
8142       \let\@currentHref\Hy@float@currentHref
8143     \fi
8144     \float@caption
8145   }%
8146   \let\HyOrg@float@makebox\float@makebox
8147   \let\float@makebox\HyNew@float@makebox
8148 }{}

8149 \</package>
8150 \< *check>
8151 \checklatex[1999/06/01 - 2000/06/01]
8152 \checkcommand\def\caption{%
8153   \ifx\@cuptype\undefined
8154     \@latex@error{\noexpand\caption outside float}\@ehd
8155     \expandafter\@gobble
8156   \else
8157     \refstepcounter\@cuptype
8158     \expandafter\@firstofone
8159   \fi
8160   {\@dblarg{\@caption\@cuptype}}%
8161 }
8162 \checkcommand\long\def\@caption#1[#2]#3{%
8163   \par
8164   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8165     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8166   }%
8167   \begingroup
8168     \@parboxrestore
8169     \if@minipage
8170       \setminipage
8171     \fi
8172     \normalsize
8173     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8174   \endgroup
8175 }
8176 \</check>
8177 \< *package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

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

```

8178 \def\hyper@natlinkstart#1{%
8179   \Hy@backout{#1}%
8180   \hyper@linkstart{cite}{cite.#1}%
8181   \def\hyper@nat@current{#1}%
8182 }
8183 \def\hyper@natlinkend{%
8184   \hyper@linkend
8185 }
8186 \def\hyper@natlinkbreak#1#2{%
8187   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8188 }
8189 \def\hyper@natanchorstart#1{%
8190   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8191 }
8192 \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.

```

8193 \ltx@ifundefined{NAT@parse}{%
8194   \providecommand*\@extra@binfo{}%
8195   \providecommand*\@extra@b@citeb{}%
8196   \def\bibcite#1#2{%
8197     \@newl@bel{b}{#1\@extra@binfo}%
8198     \hyper@@link[cite]{cite.#1\@extra@b@citeb}{#2}%
8199   }%
8200 }%
8201 \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.”.

```

8202 \let\Hy@bibcite\bibcite
8203 \begingroup
8204   \@ifundefined{bbl@cite@choice}{}{%
8205     \g@addto@macro\bbl@cite@choice{%
8206       \let\bibcite\Hy@bibcite
8207     }%
8208   }%
8209 \endgroup

```

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

```

8210 \providecommand*\@BIBLABEL{\@biblabel}%
8211 \def\@bibitem[#1]#2{%
8212   \@skiphyperrreftrue
8213   \H@item[%
8214     \ifx\Hy@raisedlink\@empty
8215       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8216       \@BIBLABEL{#1}%
8217       \hyper@anchorend
8218     \else
8219       \Hy@raisedlink{%
8220         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8221       }%
8222       \@BIBLABEL{#1}%
8223     \fi
8224     \hfill
8225   ]%

```

```

8226 \@skiphyperreffalse
8227 \if@filesw
8228 \begingroup
8229 \let\protect\noexpand
8230 \immediate\write\@auxout{%
8231 \string\bibcite{#2}{#1}%
8232 }%
8233 \endgroup
8234 \fi
8235 \ignorespaces
8236 }%

```

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

```

8237 \def\@bibitem#1{%
8238 \@skiphyperrefftrue\H@item\@skiphyperreffalse
8239 \Hy@raisedlink{%
8240 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8241 }%
8242 \if@filesw
8243 \begingroup
8244 \let\protect\noexpand
8245 \immediate\write\@auxout{%
8246 \string\bibcite{#1}{\the\value{\@listctr}}}%
8247 }%
8248 \endgroup
8249 \fi
8250 \ignorespaces
8251 }%
8252 }{}

8253 \</package>
8254 \< *check>
8255 \checklatex
8256 \checkcommand\def\@lbibitem[#1]#2{%
8257 \item[\@biblabel{#1}\hfill]%
8258 \if@filesw
8259 {%
8260 \let\protect\noexpand
8261 \immediate\write\@auxout{%
8262 \string\bibcite{#2}{#1}%
8263 }%
8264 }%
8265 \fi
8266 \ignorespaces
8267 }
8268 \checkcommand\def\@bibitem#1{%
8269 \item
8270 \if@filesw
8271 \immediate\write\@auxout{%
8272 \string\bibcite{#1}{\the\value{\@listctr}}}%
8273 }%
8274 \fi
8275 \ignorespaces
8276 }
8277 \</check>
8278 \< *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.

```

8279 \ifclassloaded{revtex}{}%
8280 \Hy@Info{*** compatibility with revtex **** }%
8281 \def\revtex@checking#1#2{%
8282   \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8283   \expandafter\def\csname b@#1\endcsname{#2}%
8284   \@SetMaxRnhefLabel{#1}%
8285   \expandafter\let\csname b@#1\endcsname\T@temp
8286 }%

```

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

```

8287 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8288 \providecommand*{\@extra@b@citeb}{}%
8289 \def\CITE[#1]#2{%
8290   \let\@citea\@empty
8291   \leavevmode
8292   \unskip
8293   $\{
8294   \scriptstyle
8295   \@CITE{%
8296     \@for\@citeb:=#2\do{%
8297       \@citea
8298       \def\@citea{\penalty\@m }%
8299       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8300       \if@filesw
8301         \immediate\write\@auxout{\string\citation{\@citeb}}%
8302       \fi
8303       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8304       \mbox{\reset@font\bfseries ?}%
8305       \G@refundefinedtrue
8306       \@latex@warning{%
8307         Citation ‘\@citeb’ on page \thepage \space undefined%
8308       }%
8309       }{%
8310         {\csname b@\@citeb\extra@b@citeb\endcsname}%
8311       }%
8312     }%
8313   }{#1}%
8314   }$%
8315 }%

```

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.

```

8316 \def\@citex[#1]#2{%
8317   \let\@citea\@empty
8318   \@cite{%
8319     \@for\@citeb:=#2\do{%
8320       \@citea
8321       \def\@citea{\penalty\@m }%
8322       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8323       \if@filesw
8324         \immediate\write\@auxout{\string\citation{\@citeb}}%
8325       \fi
8326       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8327       \mbox{\reset@font\bfseries ?}%
8328       \G@refundefinedtrue

```

```

8329      \@latex@warning{%
8330          Citation ‘\@citeb’ on page \thepage \space undefined%
8331      }%
8332  }{%
8333      \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8334  }%
8335  }%
8336  }{#1}%
8337  }%
8338  }{}

```

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.

```

8339 \ifpackageloaded{harvard}{%
8340   \Hy@AtBeginDocument{%
8341     \Hy@Info{*** compatibility with harvard *** }%
8342     \Hy@raiselinksfalse
8343     \def\harvardcite#1#2#3#4{%
8344       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
8345       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
8346       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
8347       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8348     }%
8349     \def\HAR@citetoaux#1{%
8350       \iffiles\immediate\write\@auxout{\string\citation{#1}}\fi%
8351       \ifHy@backref
8352         \ifx\@empty\@currentlabel
8353           \else
8354             \@bsphack
8355             \iffiles
8356               \protected@write\@auxout{}{%
8357                 \string\@writefile{brf}{%
8358                   \string\backcite{#1}{%
8359                     {\thepage}{\@currentlabel}{\@currentHref}%
8360                   }%
8361                 }%
8362               }%
8363             \fi
8364             \@esphack
8365           \fi
8366         \fi
8367       }%
8368       \def\harvarditem{%
8369         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8370       }%
8371       \def\@harvarditem[#1]#2#3#4#5\par{%
8372         \item[]%
8373         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8374         \iffiles

```

```

8375 \begingroup
8376 \def\protect##1{\string ##1\space}%
8377 \ifthenelse{\equal{#1}{\null}}{%
8378   {\def\next{{#4}{#2}{#2}{#3}}}%
8379   {\def\next{{#4}{#2}{#1}{#3}}}%
8380 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8381 \endgroup
8382 \fi
8383 \protect\hspace*{-\labelwidth}%
8384 \protect\hspace*{-\labelsep}%
8385 \ignorespaces
8386 #5%
8387 \ifHy@backref
8388 \newblock
8389 \backref{\csname br@#4\endcsname}%
8390 \fi
8391 \par
8392 }%

```

\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:

```

8393 \long\def\HAR@checkcitations#1#2#3#4{%
8394   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8395   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8396     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8397     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8398       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8399       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8400         \else
8401           \@tempswatrue
8402         \fi
8403       \else
8404         \@tempswatrue
8405       \fi
8406     \else
8407       \@tempswatrue
8408     \fi
8409   }%
8410 }%
8411 {}

```

38.2 Package chicago

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

```

8412 \@ifpackageloaded{chicago}{%

```

\citeN

```

8413 \def\citeN{%
8414   \def\@citesep{~1000}%
8415   \def\@cite##1##2{{##1}}%
8416   \def\citeauthoryear##1##2##3{{##1} (##3\@cite@opt)}}%
8417   \@citedata@opt
8418 }%

```

```

\shortciteN
8419 \def\shortciteN{%
8420   \def\@citesep{~1000}%
8421   \def\@cite##1##2{##1}%
8422   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8423   \@citedata@opt
8424 }%

\@citedata@opt
8425 \def\@citedata@opt{%
8426   \let\@cite@opt\@empty
8427   \@ifnextchar [{%
8428     \@tempswatrue
8429     \@citedatax@opt
8430   }{%
8431     \@tempswafalse
8432     \@citedatax[]%
8433   }%
8434 }%

\@citedatax@opt
8435 \def\@citedatax@opt[#1]{%
8436   \def\@cite@opt{, #1}%
8437   \@citedatax[{#1}]%
8438 }%

8439 }{}

```

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.

```

8440 \ltx@ifclassloaded{slides}{%
8441   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8442   \def\Hy@PageAnchorSlidesPlain{%
8443     \advance\c@page\ltx@one
8444     \edef\Hy@TempPageAnchor{%
8445       \noexpand\hyper@@@anchor{%
8446         page.\the\c@slide.\the\c@overlay.\the\c@note%
8447         \ifnum\c@page=\ltx@one
8448           \else
8449             .\the\c@page
8450           \fi
8451         }%
8452       }%
8453     \advance\c@page-\ltx@one
8454   }%
8455   \def\Hy@PageAnchorSlide{%
8456     \advance\c@page\ltx@one
8457     \ifnum\c@page>\ltx@one
8458       \ltx@ifundefined{theHpage}{%
8459         \protected@edef\Hy@TheSlideOptionalPage{%

```

```

8460     \Hy@SlidesFormatOptionalPage{\thepage}%
8461     }%
8462   }{%
8463     \protected@edef\Hy@TheSlideOptionalPage{%
8464       \Hy@SlidesFormatOptionalPage{\theHpage}%
8465     }%
8466   }%
8467   \else
8468     \def\Hy@TheSlideOptionalPage{}%
8469   \fi
8470   \advance\c@page-\ltx@one
8471   \pdfstringdef\@the@H@page{%
8472     \csname
8473       the%
8474       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8475       \Hy@SlidesPage
8476     \endcsname
8477     \Hy@TheSlideOptionalPage
8478   }%
8479   \ltx@gobblethree
8480 }%
8481 \def\Hy@SlidesPage{slide}%
8482 \g@addto@macro\slide{%
8483   \def\Hy@SlidesPage{slide}%
8484 }%
8485 \g@addto@macro\overlay{%
8486   \def\Hy@SlidesPage{overlay}%
8487 }%
8488 \g@addto@macro\note{%
8489   \def\Hy@SlidesPage{note}%
8490 }%
8491 }{%
8492   \def\Hy@PageAnchorSlidesPlain{}%
8493   \def\Hy@PageAnchorSlide{}%
8494 }
8495 \def\Hy@EveryPageAnchor{%
8496   \Hy@DistillerDestFix
8497   \ifHy@pageanchor
8498     \ifHy@hypertextnames
8499       \ifHy@plainpages
8500         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8501         \Hy@PageAnchorSlidesPlain
8502       \else
8503         \begingroup
8504           \let\@number\@firstofone
8505           \Hy@unicodedefalse
8506           \Hy@PageAnchorSlide
8507           \pdfstringdef\@the@H@page{\thepage}%
8508         \endgroup
8509         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8510         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8511       \fi
8512     \else
8513       \Hy@GlobalStepCount\Hy@pagecounter
8514       \def\Hy@TempPageAnchor{%
8515         \hyper@@anchor{page.\the\Hy@pagecounter}%
8516       }%

```

```

8517 \fi
8518 \vbox to 0pt{%
8519 \kern\voffset
8520 \kern\topmargin
8521 \kern-1bp\relax
8522 \hbox to 0pt{%
8523 \kern\hoffset
8524 \kern\ifodd\value{page}%
8525 \oddsidemargin
8526 \else
8527 \evensidemargin
8528 \fi
8529 \kern-1bp\relax
8530 \Hy@TempPageAnchor\relax
8531 \hss
8532 }%
8533 \vss
8534 }%
8535 \fi
8536 }
8537 \g@addto@macro\Hy@EveryPageBoxHook{%
8538 \Hy@EveryPageAnchor
8539 }

```

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.

```

8540 \def\addcontentsline#1#2#3{% toc extension, type, tag
8541 \begingroup
8542 \let\label\@gobble
8543 \ifx\@currentHref\@empty
8544 \Hy@Warning{%
8545 No destination for bookmark of \string\addcontentsline,%
8546 \MessageBreak destination is added%
8547 }%
8548 \phantomsection
8549 \fi
8550 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8551 \begingroup
8552 \def\Hy@tempa{#1}%
8553 \ifx\Hy@tempa\Hy@bookmarkstype
8554 \Hy@WarningNoLine{%
8555 bookmark level for unknown #2 defaults to 0%
8556 }%
8557 \else
8558 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8559 \fi
8560 \endgroup
8561 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8562 \fi
8563 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8564 \Hy@writebookmark{\csname the#2\endcsname}%
8565 {#3}%
8566 {\@currentHref}%

```

```

8567     {\Hy@toclevel}%
8568     {#1}%
8569     \ifHy@verbose
8570     \begingroup
8571       \def\Hy@tempa{#3}%
8572       \@onelevel@sanitize\Hy@tempa
8573       \let\temp@online\on@line
8574       \let\on@line\@empty
8575       \Hy@Info{%
8576         bookmark\temp@online:\MessageBreak
8577         thecounter {\csname the#2\endcsname}\MessageBreak
8578         text {\Hy@tempa}\MessageBreak
8579         reference {\@currentHref}\MessageBreak
8580         toclevel {\Hy@toclevel}\MessageBreak
8581         type {#1}%
8582       }%
8583     \endgroup
8584     \fi
8585     \addtocontents{#1}{%
8586       \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8587     }%
8588   \endgroup
8589 }

```

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

```

8590 \def\contentsline#1#2#3#4{%
8591   \begingroup
8592   \Hy@safe@activetrue
8593   \edef\x{\endgroup
8594     \def\noexpand\Hy@tocdestname{#4}%
8595   }\x
8596   \ifx\Hy@tocdestname\ltx@empty
8597     \csname l@#1\endcsname{#2}{#3}%
8598   \else
8599     \ifcase\Hy@linktoc % none
8600       \csname l@#1\endcsname{#2}{#3}%
8601     \or % section
8602       \csname l@#1\endcsname{%
8603         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8604       }{#3}%
8605     \or % page
8606       \def\Hy@temp{#3}%
8607       \ifx\Hy@temp\ltx@empty
8608         \csname l@#1\endcsname{#2}{#3}%
8609       \else
8610         \csname l@#1\endcsname{{#2}}{%
8611           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8612         }%
8613       \fi
8614     \else % all
8615       \def\Hy@temp{#3}%
8616       \ifx\Hy@temp\ltx@empty
8617         \csname l@#1\endcsname{%
8618           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8619         }{}%
8620       \else

```

```

8621     \csname l@#1\endcsname{%
8622     \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8623     }{%
8624     \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8625     }%
8626     \fi
8627     \fi
8628     \fi
8629 }

8630 </package>
8631 <*check>
8632 \checklatex
8633 \checkcommand\def\addcontentsline#1#2#3{%
8634   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8635 }
8636 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8637 </check>
8638 <*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.

```

8639 \let\H@definecounter\@definecounter
8640 \def\@definecounter#1{%
8641   \H@definecounter{#1}%
8642   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8643 }

```

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.

```

8644 \let\H@newctr\@newctr
8645 \def\@newctr#1[#2]{%
8646   \H@newctr#1[#2]%
8647   \expandafter\gdef\csname theH#1\endcsname{%
8648     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8649   }%
8650 }

```

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.

```

8651 \@ifpackageloaded{amsmath}{%
8652   \def\Hy@make@anchor{%
8653     \Hy@MakeCurrentHrefAuto{AMS}%
8654     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8655   }%
8656   \def\Hy@make@df@tag@@#1{%
8657     \gdef\df@tag{%

```

```

8658 \maketag@@@{\Hy@make@anchor#1}%
8659 \def\@currentlabel{#1}%
8660 }%
8661 }%
8662 \def\Hy@make@df@tag@@@#1{%
8663 \gdef\df@tag{%
8664 \tagform@{\Hy@make@anchor#1}%
8665 \toks@{\exp{\p@equation{#1}}}%
8666 \edef\@currentlabel{\the\toks@}%
8667 }%
8668 }%
8669 \let\HyOrg@make@df@tag@@\make@df@tag@@
8670 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8671 \let\make@df@tag@@\Hy@make@df@tag@@
8672 \let\make@df@tag@@@\Hy@make@df@tag@@@
8673 }{}

```

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

```

8674 \ifpackagewith{hyperref}{pdftex}{%
8675 \let\H@seteqlabel\@seteqlabel
8676 \def\@seteqlabel#1{%
8677 \H@seteqlabel{#1}%
8678 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8679 \Hy@raisedlink{%
8680 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8681 }%
8682 }%
8683 }{}

```

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.

```

8684 \let\HyOrg@addtoreset\@addtoreset
8685 \def\@addtoreset#1#2{%
8686 \HyOrg@addtoreset{#1}{#2}%
8687 \expandafter\xdef\csname theH#1\endcsname{%
8688 \expandafter\noexpand
8689 \csname the\@ifundefined{theH#2}{H#2\endcsname
8690 .\noexpand\the\noexpand\value{#1}%
8691 }%
8692 }

```

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

```

8693 \</package>
8694 \< *check>
8695 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8696 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8697   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8698     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8699       \@addtoreset{#2}{#3}%
8700       \@xp\xdef\csname the#2\endcsname{%
8701         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8702       }%
8703     }%
8704   }%
8705 }%
8706 \</check>
8707 \< *package>
8708 \@ifpackageloaded{amsmath}{%
8709   \@ifpackagelater{amsmath}{1999/12/14}{%
8710     \renewcommand*\numberwithin[3][\arabic]{%
8711       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8712         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8713           \HyOrg@addtoreset{#2}{#3}%
8714           \@xp\xdef\csname the#2\endcsname{%
8715             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8716           }%
8717           \@xp\xdef\csname theH#2\endcsname{%
8718             \@xp\@nx
8719             \csname the\@ifundefined{theH#3}{H#3}\endcsname
8720             .\@nx#1{#2}%
8721           }%
8722         }%
8723       }%
8724     }%
8725   }%
8726   \Hy@WarningNoLine{%
8727     \string\numberwithin\space of package 'amsmath' %
8728     only fixed\MessageBreak
8729     for version 2000/06/06 v2.12 or newer%
8730   }%
8731 }%
8732 \< }>

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8733 \ifHy@hyperfigures
8734   \let\Hy@Gin@setfile\Gin@setfile
8735   \def\Gin@setfile#1#2#3{%
8736     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8737   }%
8738 \fi
8739 \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.

```

8740 \ifHy@hyperindex
8741   \def\HyInd@ParenLeft{({}%
8742   \def\HyInd@ParenRight{)}}%
8743   \def\hyperindexformat#1#2{%
8744     \let\HyOrg@hyperpage\hyperpage
8745     \let\hyperpage\@firstofone
8746     #1{\HyOrg@hyperpage{#2}}%
8747     \let\hyperpage\HyOrg@hyperpage
8748   }%
8749   \Hy@nextfalse
8750   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8751   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8752   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8753   \begingroup
8754     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
8755     \lccode'\|/='\| \relax
8756   \lowercase{\endgroup
8757   \ifHy@next
8758     \let\HyInd@org@wrindex\@wrindex
8759     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2| \|}%
8760     \def\HyInd@@wrindex#1#2|#3|#4\|{%
8761       \ifx\|#3\|
8762         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8763       \else
8764         \HyInd@@@wrindex{#1}{#2}#3\|
8765       \fi
8766     }%
8767     \def\HyInd@@@wrindex#1#2#3#4\|{%
8768       \def\Hy@temp@A{#3}%
8769       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8770         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8771         \relax
8772       \HyInd@org@wrindex{#1}{%
8773         #2|hyperindexformat{/#3#4}%
8774       }%
8775     \else
8776       \ifx\|#4\|
8777         \ifx\Hy@temp@A\HyInd@ParenRight
8778           \HyInd@org@wrindex{#1}{#2|#3}%
8779         \else
8780           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8781         \fi
8782       \else
8783         \HyInd@org@wrindex{#1}{%
8784           #2|#3hyperindexformat{/#4}%
8785         }%
8786       \fi
8787     \fi
8788   }%

```

```

8789 \else
8790 \def\@wrindex#1{\@wrindex#1||\}%
8791 \def\@wrindex#1|#2|#3\{\%
8792 \if@filesw
8793 \ifx\|#2\%
8794 \protected@write\@indexfile{\%
8795 \string\indexentry{#1|hyperpage}{\thepage}%
8796 }%
8797 \else
8798 \HyInd@@@wrindex{#1}#2\%
8799 \fi
8800 \fi
8801 \endgroup
8802 \@esphack
8803 }%
8804 \def\HyInd@@@wrindex#1#2#3\{\%
8805 \def\Hy@temp@A{#2}%
8806 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8807 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8808 \relax
8809 \protected@write\@indexfile{\%
8810 \string\indexentry{%
8811 #1|hyperindexformat{/#2#3}%
8812 }{\thepage}%
8813 }%
8814 \else
8815 \ifx\|#3\%
8816 \ifx\Hy@temp@A\HyInd@ParenRight
8817 \HyInd@DefKey{#1}%
8818 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8819 \let\Hy@temp\ltx@empty
8820 }{\%
8821 \expandafter\let\expandafter\Hy@temp
8822 \csname HyInd@(\HyInd@key)\endcsname
8823 }%
8824 \protected@write\@indexfile{\%
8825 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8826 }%
8827 \else
8828 \protected@write\@indexfile{\%
8829 \string\indexentry{#1|#2hyperpage}{\thepage}%
8830 }%
8831 \HyInd@DefKey{#1}%
8832 \expandafter
8833 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8834 hyperpage%
8835 }%
8836 \fi
8837 \else
8838 \protected@write\@indexfile{\%
8839 \string\indexentry{%
8840 #1|#2hyperindexformat{/#3}%
8841 }{\thepage}%
8842 }%
8843 \ifx\Hy@temp@A\HyInd@ParenLeft
8844 \HyInd@DefKey{#1}%
8845 \expandafter

```

```

8846         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8847             hyperindexformat{/#3}%
8848         }%
8849     \fi
8850 \fi
8851 \fi
8852 }%
8853 \def\HyInd@DefKey#1{%
8854     \begingroup
8855     \let\protect\@unexpandable@protect
8856     \edef\Hy@temp{#1}%
8857     \ltx@onelevel@sanitize\Hy@temp
8858     \global\let\HyInd@key\Hy@temp
8859 \endgroup
8860 }%
8861 \fi
8862 }%
8863 \fi
8864 \Hy@DisableOption{hyperindex}
8865 \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.

```

8866 \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.

```

8867 \def\hyperpage#1{%
8868     \HyInd@hyperpage#1\nohyperpage{}\@nil
8869 }
8870 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8871     \HyInd@@hyperpage{#1}%
8872     #2%
8873     \def\Hy@temp{#3}%
8874     \ifx\Hy@temp\@empty
8875     \else
8876         \ltx@ReturnAfterFi{%
8877             \HyInd@hyperpage#3\@nil
8878         }%
8879     \fi
8880 }
8881 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8882 \def\@hyperpage#1--#2--#3\{%
8883     \ifx\#2\%
8884         \@commahyperpage{#1}%
8885     \else
8886         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8887     \fi
8888 }
8889 \def\@commahyperpage#1{\@commahyperpage#1, \}
8890 \def\@commahyperpage#1, #2, #3\{%
8891     \ifx\#2\%
8892         \HyInd@pagelink{#1}%
8893     \else
8894         \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8895     \fi
8896 }

```

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

```

8897 \def\HyInd@pagelink#1{%
8898   \begingroup
8899   \toks@={}%
8900   \HyInd@removespaces#1 \@nil
8901   \endgroup
8902 }
8903 \def\HyInd@removespaces#1 #2\@nil{%
8904   \toks@=\expandafter{\the\toks@#1}%
8905   \ifx\#2\%
8906     \edef\x{\the\toks@}%
8907     \ifx\x\@empty
8908       \else
8909         \hyperlink{page.\the\toks@}{\the\toks@}%
8910       \fi
8911     \else
8912       \ltx@ReturnAfterFi{%
8913         \HyInd@removespaces#2\@nil
8914       }%
8915     \fi
8916 }

```

45 Compatibility with foiltex

```

8917 \@ifclassloaded{foils}{%
8918   \providecommand*{\ext@table}{lot}%
8919   \providecommand*{\ext@figure}{lof}%
8920 }{}

```

46 Compatibility with seminar slide package

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

```

8921 \@ifclassloaded{seminar}{%
8922   \Hy@seminarstrue
8923   \providecommand\theHslide{\arabic{slide}}%
8924 }{%
8925   \Hy@seminarslidesfalse
8926 }
8927 \@ifpackageloaded{slidesec}{%
8928   \providecommand\theHslidesection {\arabic{slidesection}}%
8929   \providecommand\theHslidesubsection{%
8930     \theHslidesection.\arabic{slidesubsection}}%
8931   }%
8932   \def\slide@heading[#1]#2{%
8933     \H@refstepcounter{slidesection}%
8934     \@addtoreset{slidesubsection}{slidesection}%
8935     \addtocontents{los}{%
8936       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8937       {\@SCTR}{\slideheading.\theslidesection}}%
8938     }%
8939   \def\Hy@tempa{#2}%
8940   \ifx\Hy@tempa\@empty
8941     \else
8942     {%

```

```

8943     \edef\@currentlabel{%
8944         \csname p@slidesection\endcsname\theslidesection
8945     }%
8946     \makeslideheading{#2}%
8947 }%
8948 \fi
8949 \gdef\theslideheading{#1}%
8950 \gdef\theslidesubheading{}%
8951 \ifHy@bookmarksnumbered
8952     \def\Hy@slidetitle{\theslidesection\space #1}%
8953 \else
8954     \def\Hy@slidetitle{#1}%
8955 \fi
8956 \ifHy@hypertextnames
8957     \ifHy@naturalnames
8958         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8959         \Hy@writebookmark
8960             {\theslidesection}%
8961             {\Hy@slidetitle}%
8962             {slideheading.\theslidesection}%
8963             {1}%
8964             {toc}%
8965     \else
8966         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8967         \Hy@writebookmark
8968             {\theslidesection}%
8969             {\Hy@slidetitle}%
8970             {slideheading.\theHslidesection}%
8971             {1}%
8972             {toc}%
8973     \fi
8974 \else
8975     \Hy@GlobalStepCount\Hy@linkcounter
8976     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8977     \Hy@writebookmark
8978         {\theslidesection}%
8979         {\Hy@slidetitle}%
8980         {slideheading.\the\Hy@linkcounter}%
8981         {1}%
8982         {toc}%
8983 \fi
8984 }%
8985 \def\slide@subheading[#1]#2{%
8986     \H@refstepcounter{slidesubsection}%
8987     \addtocontents{los}{%
8988         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8989         {\@SCTR}{slideheading.\theslidesubsection}%
8990     }%
8991     \def\Hy@tempa{#2}%
8992     \ifx\Hy@tempa\@empty
8993     \else
8994         {%
8995             \edef\@currentlabel{%
8996                 \csname p@slidesubsection\endcsname\theslidesubsection
8997             }%
8998             \makeslidesubheading{#2}%
8999         }%

```

```

9000 \fi
9001 \gdef\theslidesubheading{#1}%
9002 \ifHy@bookmarksnumbered
9003   \def\Hy@slidetitle{\theslidesubsection\space #1}%
9004 \else
9005   \def\Hy@slidetitle{#1}%
9006 \fi
9007 \ifHy@hypertextnames
9008   \ifHy@naturalnames
9009     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9010     \Hy@writebookmark
9011       {\theslidesubsection}%
9012       {\Hy@slidetitle}%
9013       {slideheading.\theslidesubsection}%
9014       {2}%
9015       {toc}%
9016   \else
9017     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9018     \Hy@writebookmark
9019       {\theslidesubsection}%
9020       {\Hy@slidetitle}%
9021       {slideheading.\theHslidesubsection}%
9022       {2}%
9023       {toc}%
9024   \fi
9025 \else
9026   \Hy@GlobalStepCount\Hy@linkcounter
9027   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9028   \Hy@writebookmark
9029     {\theslidesubsection}%
9030     {\Hy@slidetitle}%
9031     {slideheading.\the\Hy@linkcounter}%
9032     {1}%
9033     {toc}%
9034 \fi
9035 }%
9036 \providecommand*{\listslidenam}{List of Slides}%
9037 \def\listofslides{%
9038   \section*{%
9039     \listslidenam
9040     \@mkboth{%
9041       \expandafter\MakeUppercase\listslidenam
9042     }{%
9043       \expandafter\MakeUppercase\listslidenam
9044     }%
9045   }%
9046   \def\l@slide##1##2##3##4{%
9047     \slide@undottedcline{%
9048       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9049     }{%
9050     }%
9051     \let\l@subslide\l@slide
9052     \@startlos
9053   }%
9054   \def\slide@contents{%
9055     \def\l@slide##1##2##3##4{%
9056       \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%

```

```

9057 }%
9058 \let\l@subslide\@gobblefour
9059 \@startlos
9060 }%
9061 \def\Slide@contents{%
9062   \def\l@slide##1##2##3##4{%
9063     \ifcase\lslide@flag
9064       \message{##1 ** \the\c@slidesection}%
9065       \ifnum##1>\c@slidesection
9066         \def\lslide@flag{1}%
9067         {%
9068           \large
9069           \slide@cline{%
9070             \slidenumberline{$\Rightarrow\bullet$}%
9071             {\hyperlink{##4}{##2}}}%
9072           }{##3}%
9073         }%
9074       \else
9075         {%
9076           \large
9077           \slide@cline{%
9078             \slidenumberline{$\surd$;\bullet$}%
9079             {\hyperlink{##4}{##2}}}%
9080           }{##3}%
9081         }%
9082       \fi
9083     \or
9084     \def\lslide@flag{2}%
9085     {%
9086       \large
9087       \slide@cline{%
9088         \slidenumberline{$\bullet$}%
9089         {\hyperlink{##4}{##2}}}%
9090       }{##3}%
9091     }%
9092     \or
9093     {%
9094       \large
9095       \slide@cline{%
9096         \slidenumberline{$\bullet$}%
9097         {\hyperlink{##4}{##2}}}%
9098       }{##3}%
9099     }%
9100     \fi
9101   }%
9102   \def\l@subslide##1##2##3##4{%
9103     \ifnum\lslide@flag=1 %
9104       \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{ }%
9105     \fi
9106   }%
9107   \def\lslide@flag{0}%
9108   \@startlos
9109 }%
9110 }{}

```

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.)

```

9111 \ifHy@texht
9112 \expandafter\endinput
9113 \fi
9114 \let\real@setref\@setref
9115 \def\@setref#1#2#3{% csname, extract group, refname
9116 \ifx#1\relax
9117 \protect\G@refundefinedtrue
9118 \nfss@text{\reset@font\bfseries ??}%
9119 \@latex@warning{%
9120 Reference ‘#3’ on page \thepage \space undefined%
9121 }%
9122 \else
9123 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9124 \fi
9125 }

```

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

```

9126 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9127 \begingroup
9128 \toks0={\hyper@@link{#5}{#4}}%
9129 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9130 \edef\x{\endgroup
9131 \the\toks0 {\the\toks1 }%
9132 }%
9133 \x
9134 }
9135 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9136 \ifx#1\relax
9137 \protect\G@refundefinedtrue
9138 \nfss@text{\reset@font\bfseries ??}%
9139 \@latex@warning{%
9140 Reference ‘#3’ on page \thepage \space undefined%
9141 }%
9142 \else
9143 \protect\hyper@@link
9144 {\expandafter\@fifthoffive#1}%
9145 {page.\expandafter\@secondoffive#1}%
9146 {\expandafter\@secondoffive#1}%
9147 \fi
9148 }
9149 \</package>
9150 \<*check>
9151 \checklatex
9152 \checkcommand\def\@setref#1#2#3{%
9153 \ifx#1\relax
9154 \protect\G@refundefinedtrue
9155 \nfss@text{\reset@font\bfseries ??}%
9156 \@latex@warning{%
9157 Reference ‘#3’ on page \thepage\space undefined%
9158 }%
9159 \else
9160 \expandafter#2#1\@null
9161 \fi
9162 }
9163 \</check>

```

9164 `{*package}`

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

```

9165 \def\HyRef@StarSetRef#1{%
9166   \begingroup
9167   \Hy@safe@activestru
9168   \edef\x{#1}%
9169   \@onelevel@sanitize\x
9170   \edef\x{\endgroup
9171     \noexpand\HyRef@@StarSetRef
9172     \expandafter\noexpand\csname r@\x\endcsname{x}%
9173   }%
9174   \x
9175 }
9176 \def\HyRef@@StarSetRef#1#2#3{%
9177   \ifx#1\@undefined
9178     \let#1\relax
9179   \fi
9180   \real@setref#1#3{#2}%
9181 }
9182 \def\@refstar#1{%
9183   \HyRef@StarSetRef{#1}\@firstoffive
9184 }
9185 \def\@pagerefstar#1{%
9186   \HyRef@StarSetRef{#1}\@secondoffive
9187 }
9188 \def\@namerefstar#1{%
9189   \HyRef@StarSetRef{#1}\@thirdoffive
9190 }
9191 \Hy@AtBeginDocument{%
9192   \@ifpackageloaded{varioref}{%
9193     \def\@Refstar#1{%
9194       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9195     }%
9196     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9197       \MakeUppercase#1%
9198     }%
9199     \DeclareRobustCommand*{\Ref}{%
9200       \@ifstar\@Refstar\HyRef@Ref
9201     }%
9202     \def\HyRef@Ref#1{%
9203       \hyperref[{#1}]{\Ref*{#1}}%
9204     }%
9205     \def\Vr@f#1{%
9206       \leavevmode\unskip\vref@space
9207       \hyperref[{#1}]{%
9208         \Ref*{#1}%
9209         \let\vref@space\nobreakspace
9210         \@vpageref\unskip]{#1}%
9211       }%
9212     }%
9213     \def\vr@f#1{%
9214       \leavevmode\unskip\vref@space
9215       \begingroup
9216       \let\T@pageref\@pagerefstar
9217       \hyperref[{#1}]{%
9218         \ref*{#1}%

```

```

9219     \vpageref[\unskip]{#1}%
9220   }%
9221   \endgroup
9222 }%
9223 }{}%
9224 }
9225 \DeclareRobustCommand*\autopageref{%
9226   \@ifstar{%
9227     \HyRef@autopagerefname\pageref*%
9228   }\HyRef@autopageref
9229 }
9230 \def\HyRef@autopageref#1{%
9231   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9232 }
9233 \def\HyRef@autopagerefname{%
9234   \ltx@ifundefined{pageautorefname}{%
9235     \ltx@ifundefined{pagename}{%
9236       \Hy@Warning{No autoref name for 'page'}%
9237     }{%
9238       \pagename\nobreakspace
9239     }%
9240   }{%
9241     \pageautorefname\nobreakspace
9242   }%
9243 }

```

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

```

9244 \DeclareRobustCommand*\autoref{%
9245   \leavevmode
9246   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@@link}%
9247 }
9248 \def\HyRef@autoref#1#2{%
9249   \begingroup
9250   \Hy@safe@activetrue
9251   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9252   \endgroup
9253 }
9254 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9255   \HyRef@ShowKeysRef{#2}%
9256   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9257   \edef\HyRef@thisref{%
9258     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9259   }%
9260   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9261   \Hy@safe@activesfalse
9262   #3{%
9263     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9264   }{%
9265     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9266   }{%
9267     \HyRef@currentHtag
9268     \expandafter\@firstoffive#1\@empty\@empty\@empty
9269     \null
9270   }%
9271   \else
9272     \protect\G@refundefinedtrue
9273     \nfss@text{\reset@font\bfseries ??}%

```

```

9274 \latex@warning{%
9275   Reference '#2' on page \thepage\space undefined%
9276 }%
9277 \fi
9278 }
9279 \def\HyRef@testreftype#1.#2\{\%
9280 \ltx@ifundefined{#1autorefname}\%
9281 \ltx@ifundefined{#1name}\%
9282 \HyRef@StripStar#1\*\@nil{#1}%
9283 \ltx@ifundefined{\HyRef@name autorefname}\%
9284 \ltx@ifundefined{\HyRef@name name}\%
9285 \def\HyRef@currentHtag{%
9286 \Hy@Warning{No autoref name for '#1'}%
9287 }{%
9288 \edef\HyRef@currentHtag{%
9289 \expandafter\noexpand\csname\HyRef@name name\endcsname
9290 \noexpand~%
9291 }%
9292 }%
9293 }{%
9294 \edef\HyRef@currentHtag{%
9295 \expandafter\noexpand
9296 \csname\HyRef@name autorefname\endcsname
9297 \noexpand~%
9298 }%
9299 }%
9300 }{%
9301 \edef\HyRef@currentHtag{%
9302 \expandafter\noexpand\csname#1name\endcsname
9303 \noexpand~%
9304 }%
9305 }%
9306 }{%
9307 \edef\HyRef@currentHtag{%
9308 \expandafter\noexpand\csname#1autorefname\endcsname
9309 \noexpand~%
9310 }%
9311 }%
9312 }
9313 \def\HyRef@StripStar#1*\#2\@nil#3{%
9314 \def\HyRef@name{#2}%
9315 \ifx\HyRef@name\HyRef@CaseStar
9316 \def\HyRef@name{#1}%
9317 \else
9318 \def\HyRef@name{#3}%
9319 \fi
9320 }
9321 \def\HyRef@CaseStar{*\\}
9322 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9323 \let\HyRef@ShowKeysRef\@gobble
9324 \def\HyRef@ShowKeysInit{%
9325 \begingroup\expandafter\expandafter\expandafter\endgroup
9326 \expandafter\ifx\csname SK@@label\endcsname\relax
9327 \else

```

```

9328 \ifx\SK@ref\@empty
9329 \else
9330 \def\HyRef@ShowKeysRef{%
9331 \SK@\SK@\@ref
9332 }%
9333 \fi
9334 \fi
9335 }
9336 \@ifpackageloaded{showkeys}{%
9337 \HyRef@ShowKeysInit
9338 }{%
9339 \Hy@AtBeginDocument{%
9340 \@ifpackageloaded{showkeys}{%
9341 \HyRef@ShowKeysInit
9342 }{%
9343 }%
9344 }

```

```

9345 \providecommand*\AMSautorefname{\equationautorefname}
9346 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9347 \providecommand*\Itemautorefname{\itemautorefname}
9348 \providecommand*\itemautorefname{item}
9349 \providecommand*\equationautorefname{Equation}
9350 \providecommand*\footnoteautorefname{footnote}
9351 \providecommand*\itemautorefname{item}
9352 \providecommand*\figureautorefname{Figure}
9353 \providecommand*\tableautorefname{Table}
9354 \providecommand*\partautorefname{Part}
9355 \providecommand*\appendixautorefname{Appendix}
9356 \providecommand*\chapterautorefname{chapter}
9357 \providecommand*\sectionautorefname{section}
9358 \providecommand*\subsectionautorefname{subsection}
9359 \providecommand*\subsubsectionautorefname{subsubsection}
9360 \providecommand*\paragraphautorefname{paragraph}
9361 \providecommand*\subparagraphautorefname{subparagraph}
9362 \providecommand*\FancyVerbLineautorefname{line}
9363 \providecommand*\theoremautorefname{Theorem}
9364 \providecommand*\pageautorefname{page}
9365 \end{package}

```

47.1 PS/PDF strings

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`.

```

9370 \catcode'\|=0 %
9371 \@makeother\|%
9372 |@firstofone{|endgroup
9373 |def|Hy@pstringdef#1#2{%
9374 |begingroup
9375 |edef~{|string~}%
9376 |xdef|Hy@gtemp{#2}%
9377 |endgroup
9378 |let#1|Hy@gtemp
9379 |@onelevel@sanitize#1%
9380 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9381 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1|@nil}%
9382 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
9383 }%
9384 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9385 #1%
9386 |ifx|\#2|\|%
9387 |else
9388 \|%
9389 |ltx@ReturnAfterFi{%
9390 |Hy@ExchangeBackslash#2|@nil
9391 }%
9392 |fi
9393 }%
9394 }%
9395 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9396 #1%
9397 \ifx\#2\|%
9398 \else
9399 \@backslashchar(%
9400 \ltx@ReturnAfterFi{%
9401 \Hy@ExchangeLeftParenthesis#2\@nil
9402 }%
9403 \fi
9404 }%
9405 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9406 #1%
9407 \ifx\#2\|%
9408 \else
9409 \@backslashchar)%
9410 \ltx@ReturnAfterFi{%
9411 \Hy@ExchangeRightParenthesis#2\@nil
9412 }%
9413 \fi
9414 }%
9415 \else
9416 \def\Hy@pstringdef#1#2{%
9417 \begingroup
9418 \edef~{\string~}%
9419 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9420 \endgroup
9421 \let#1\Hy@gtemp
9422 }%
9423 \fi
9424 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdftex

```

9425 \(*pdftex)
9426 \providecommand*\XR@ext}{pdf}
9427 \Hy@setbreaklinks{true}
9428 \def\HyPat@ObjRef{%
9429   [0-9]*[1-9][0-9]* 0 R%
9430 }

```

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

```

9431 \let\Hy@pdfminorversion\relax
9432 \begingroup\expandafter\expandafter\expandafter\endgroup
9433 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9434   \begingroup\expandafter\expandafter\expandafter\endgroup
9435   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9436     \else
9437       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9438     \fi
9439   \else
9440     \def\Hy@pdfminorversion{\pdfminorversion}%
9441   \fi
9442   \@ifundefined{Hy@pdfminorversion}{%
9443     \PackageInfo{hyperref}{%
9444       PDF version is not set, because pdfTeX is too old (<1.10a)%
9445     }%
9446   }{%
9447     \ifHy@ocgcolorlinks
9448       \ifnum\Hy@pdfminorversion<5 %
9449         \kvsetkeys{Hyp}{pdfversion=1.5}%
9450       \fi
9451     \fi
9452     \ifHy@setpdfversion
9453       \ifnum\Hy@pdfversion<5 %
9454         \ltx@ifundefined{pdfobjcompresslevel}{%
9455           }{%
9456             \ifHy@verbose
9457               \Hy@InfoNoLine{%
9458                 PDF object streams are disabled, because they are%
9459                 \MessageBreak
9460                 not supported in requested PDF version %
9461                 1.\Hy@pdfversion
9462               }%
9463             \fi
9464             \pdfobjcompresslevel=\ltx@zero
9465           }%
9466         \fi
9467         \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9468         \else
9469           \let\Hy@temp\ltx@empty
9470           \def\Hy@temp@A#1#2{%
9471             \ifnum#1>\ltx@zero
9472               \edef\Hy@temp{%

```

```

9473     \Hy@temp
9474     \space\space
9475     \the#1\space #2%
9476     \ifnum#1=\ltx@one\else s\fi
9477     \MessageBreak
9478   }%
9479   \fi
9480 }%
9481 \Hy@temp@A\pdfastobj{PDF object}%
9482 \Hy@temp@A\pdfastxform{form XObject}%
9483 \Hy@temp@A\pdfastximage{image XObject}%
9484 \Hy@temp@A\pdfastannot{annotation}%
9485 \ltx@ifundefined{pdfastlink}{%
9486   {%
9487     \Hy@temp@A\pdfastlink{link}%
9488   }%
9489 \ifx\Hy@temp\ltx@empty
9490   \Hy@pdfminorversion=\Hy@pdfversion\relax
9491 \else
9492   \let\Hy@temp@A\ltx@empty
9493   \ifnum\Hy@pdfversion=4 %
9494     \IfFileExists{pdf14.sty}{%
9495       \def\Hy@temp@A{%
9496         \MessageBreak
9497         Or \string\RequirePackage{pdf14} can be used%
9498         \MessageBreak
9499         before \string\documentclass\space as shortcut%
9500       }%
9501     }{}%
9502   \fi
9503   \Hy@WarningNoLine{%
9504     The PDF version number could not be set,\MessageBreak
9505     because some PDF objects are already written:%
9506     \MessageBreak
9507     \Hy@temp
9508     The version should be set as early as possible:%
9509     \MessageBreak
9510     \space\space
9511     \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9512     \string\relax
9513     \ifnum\Hy@pdfversion<5 %
9514       \ltx@ifundefined{pdfobjcompresslevel}{%
9515         {%
9516           \MessageBreak
9517           \space\space
9518           \string\pdfobjcompresslevel=0\string\relax
9519         }%
9520       }%
9521     }%
9522   }%
9523   \fi
9524 \fi
9525 \PackageInfo{hyperref}{%
9526   \expandafter\string\Hy@pdfminorversion
9527   :=\number\Hy@pdfversion\space
9528 }%
9529 \fi

```

```

9530 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9531 }
9532 \Hy@DisableOption{pdfversion}%

9533 \ifHy@ocgcolorlinks
9534 \pdf@ifdraftmode{}{%
9535 \immediate\pdfobj{%
9536 <<%
9537 /Type/OCG%
9538 /Name(View)%
9539 /Usage<<%
9540 /Print<<%
9541 /PrintState/OFF%
9542 >>%
9543 /View<<%
9544 /ViewState/ON%
9545 >>%
9546 >>%
9547 >>%
9548 }%
9549 \edef\OBJ@OCG@view{\the\pdfflastobj\space 0 R}%
9550 \immediate\pdfobj{%
9551 <<%
9552 /Type/OCG%
9553 /Name(Print)%
9554 /Usage<<%
9555 /Print<<%
9556 /PrintState/ON%
9557 >>%
9558 /View<<%
9559 /ViewState/OFF%
9560 >>%
9561 >>%
9562 >>%
9563 }%
9564 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
9565 \immediate\pdfobj{%
9566 [%
9567 \OBJ@OCG@view\space\OBJ@OCG@print
9568 ]%
9569 }%
9570 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
9571 \pdfcatalog{%
9572 /OCProperties<<%
9573 /OCGs \OBJ@OCGs
9574 /D<<%
9575 /OFF[\OBJ@OCG@print]%
9576 /AS[%
9577 <<%
9578 /Event/View%
9579 /OCGs \OBJ@OCGs
9580 /Category[/View]%
9581 >>%
9582 <<%
9583 /Event/Print%
9584 /OCGs \OBJ@OCGs
9585 /Category[/Print]%
9586 >>%

```

```

9587      <<%
9588      /Event/Export%
9589      /OCGs \OBJ@OCGs
9590      /Category[/Print]%
9591      >>%
9592      ]%
9593      >>%
9594      >>%
9595      }%
9596      \begingroup
9597      \edef\x{\endgroup
9598      \pdfpageresources{%
9599      \the\pdfpageresources
9600      /Properties<<%
9601      /OCView \OBJ@OCG@view
9602      /OCPrint \OBJ@OCG@print
9603      >>%
9604      }%
9605      }%
9606      \x
9607      }%
9608      \Hy@AtBeginDocument{%
9609      \def\Hy@colorlink#1{%
9610      \begingroup
9611      \ifHy@ocgcolorlinks
9612      \def\Hy@ocgcolor{#1}%
9613      \setbox0=\hbox\bgroup\color@begingroup
9614      \else
9615      \HyColor@UseColor#1%
9616      \fi
9617      }%
9618      \def\Hy@endcolorlink{%
9619      \ifHy@ocgcolorlinks
9620      \color@endgroup\egroup
9621      \mbox{%
9622      \pdfliteral page{/OC/OCPrint BDC}%
9623      \rlap{\copy0}%
9624      \pdfliteral page{EMC/OC/OCView BDC}%
9625      \begingroup
9626      \expandafter\HyColor@UseColor\Hy@ocgcolor
9627      \box0 %
9628      \endgroup
9629      \pdfliteral page{EMC}%
9630      }%
9631      \fi
9632      \endgroup
9633      }%
9634      }%
9635      \else
9636      \Hy@DisableOption{ocgcolorlinks}%
9637      \fi

```

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

```

9638 \def\setpdfinkmargin#1{%
9639 \begingroup
9640 \setlength{\dimen@}{#1}%
9641 \expandafter\endgroup
9642 \expandafter\pdfinkmargin\the\dimen@\relax

```

```

9643 }
9644 \ifx\pdfstartlink\@undefined% less than version 14
9645 \let\pdfstartlink\pdfannotlink
9646 \let\pdfinkmargin\@tempdima
9647 \let\pdfxform\pdfform
9648 \let\pdfastxform\pdfastform
9649 \let\pdfrefxform\pdfrefform
9650 \else
9651 \pdfinkmargin1pt %
9652 \fi

```

First set up the default linking

```
9653 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

9654 \Hy@WrapperDef\new@pdfink#1{%
9655 \ifhmode
9656 \savsf\spacefactor
9657 \fi
9658 \Hy@SaveLastskip
9659 \Hy@VerboseAnchor{#1}%
9660 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9661 \Hy@DestName\Hy@pstringDest\@pdfview
9662 \Hy@RestoreLastskip
9663 \ifhmode
9664 \spacefactor\@savsf
9665 \fi
9666 }
9667 \let\pdf@endanchor\@empty

```

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

```

9668 \def\Hy@DestName#1#2{%
9669 \pdfdest name{#1}#2\relax
9670 }

```

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.

```

9671 \providecommand*\@pdfborder{0 0 1}
9672 \providecommand*\@pdfborderstyle{}
9673 \def\Hy@undefinedname{UNDEFINED}
9674 \def\find@pdfink#1#2{%
9675 \leavevmode
9676 \protected@edef\Hy@testname{#2}%
9677 \ifx\Hy@testname\@empty
9678 \Hy@Warning{%
9679 Empty destination name,\MessageBreak
9680 using '\Hy@undefinedname'%
9681 }%
9682 \let\Hy@testname\Hy@undefinedname
9683 \else
9684 \Hy@pstringdef\Hy@testname{%
9685 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9686 }%
9687 \fi
9688 \Hy@StartlinkName{%

```

```

9689 \ifHy@pdfa /F 4\fi
9690 \Hy@setpdfborder
9691 \ifx\@pdfhighlight\@empty
9692 \else
9693 /H\@pdfhighlight
9694 \fi
9695 \ifx\CurrentBorderColor\relax
9696 \else
9697 /C[\CurrentBorderColor]%
9698 \fi
9699 }\Hy@testname
9700 \expandafter\Hy@colorlink\csname @#1color\endcsname
9701 }
9702 \def\Hy@StartlinkName#1#2{%
9703 \pdfstartlink attr{#1}goto name{#2}\relax
9704 }
9705 \def\close@pdfink{%
9706 \Hy@endcolorlink
9707 \Hy@VerboseLinkStop
9708 \pdfendlink
9709 }
9710 \def\hyper@anchor#1{%
9711 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9712 }
9713 \def\hyper@anchorstart#1{%
9714 \new@pdfink{#1}%
9715 \Hy@activeanchortrue
9716 }
9717 \def\hyper@anchorend{%
9718 \pdf@endanchor
9719 \Hy@activeanchorfalse
9720 }
9721 \def\hyper@linkstart#1#2{%
9722 \Hy@VerboseLinkStart{#1}{#2}%
9723 \ltx@ifundefined{@#1bordercolor}{%
9724 \let\CurrentBorderColor\relax
9725 }{%
9726 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9727 }%
9728 \find@pdfink{#1}{#2}%
9729 }
9730 \def\hyper@linkend{\close@pdfink}
9731 \def\hyper@link#1#2#3{%
9732 \Hy@VerboseLinkStart{#1}{#2}%
9733 \ltx@ifundefined{@#1bordercolor}{%
9734 \let\CurrentBorderColor\relax
9735 }{%
9736 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9737 }%
9738 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9739 \close@pdfink
9740 }
9741 \let\CurrentBorderColor\@linkbordercolor
9742 \def\hyper@linkurl#1#2{%
9743 \begingroup
9744 \Hy@pstringdef\Hy@pstringURI{#2}%
9745 \hyper@chars

```

```

9746 \leavevmode
9747 \pdfstartlink
9748 attr{%
9749   \Hy@setpdfborder
9750   \ifx\@pdfhighlight\@empty
9751   \else
9752     /H\@pdfhighlight
9753   \fi
9754   \ifx\@urlbordercolor\relax
9755   \else
9756     /C[\@urlbordercolor]%
9757   \fi
9758 }%
9759 user{%
9760   /Subtype/Link%
9761   \ifHy@pdfa /F 4\fi
9762   /A<<%
9763   /Type/Action%
9764   /S/URI%
9765   /URI(\Hy@pstringURI)%
9766   \ifHy@href@cismap
9767     /IsMap true%
9768   \fi
9769   \Hy@href@nextactionraw
9770   >>%
9771 }%
9772 \relax
9773 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9774 \close@pdfink
9775 \endgroup
9776 }
9777 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9778 \begingroup
9779 \def\Hy@pstringF{#2}%
9780 \Hy@CleanupFile\Hy@pstringF
9781 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9782 \Hy@pstringdef\Hy@pstringD{#3}%
9783 \Hy@MakeRemoteAction
9784 \leavevmode
9785 \pdfstartlink
9786 attr{%
9787   \Hy@setpdfborder
9788   \ifx\@pdfhighlight\@empty
9789   \else
9790     /H\@pdfhighlight
9791   \fi
9792   \ifx\@filebordercolor\relax
9793   \else
9794     /C[\@filebordercolor]%
9795   \fi
9796 }%
9797 user {%
9798   /Subtype/Link%
9799   \ifHy@pdfa /F 4\fi
9800   /A<<%
9801   /F(\Hy@pstringF)%
9802   /S/GoToR%

```

```

9803      \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}

9804      \ifx\#3\%
9805      /D[\Hy@href@page\@pdfremotestartview]%
9806      \else
9807      /D(\Hy@pstringD)%
9808      \fi
9809      \Hy@href@nextactionraw
9810      >>%
9811      }%
9812      \relax
9813      \Hy@colorlink\@filecolor#1\Hy@xspace@end
9814      \close@pdflink
9815      \endgroup
9816 }
9817 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9818 \begingroup
9819 \Hy@pstringdef\Hy@pstringF{#1}%
9820 \Hy@pstringdef\Hy@pstringP{#3}%
9821 \leavevmode
9822 \pdfstartlink
9823 attr{%
9824 \Hy@setpdfborder
9825 \ifx\@pdfhighlight\@empty
9826 \else
9827 /H\@pdfhighlight
9828 \fi
9829 \ifx\@runbordercolor\relax
9830 \else
9831 /C[\@runbordercolor]%
9832 \fi
9833 }%
9834 user {%
9835 /Subtype/Link%
9836 \ifHy@pdfa /F 4\fi
9837 /A<<%
9838 /F(\Hy@pstringF)%
9839 /S/Launch%
9840 \Hy@SetNewWindow
9841 \ifx\#3\%
9842 \else
9843 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9844 \fi
9845 \Hy@href@nextactionraw
9846 >>%
9847 }%

```

```

9848 \relax
9849 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9850 \close@pdflink
9851 \endgroup
9852 }

```

\@pdfproducer

```

9853 \ifx\@pdfproducer\relax
9854 \begingroup\expandafter\expandafter\expandafter\endgroup
9855 \expandafter\ifx\csname luatexversion\endcsname\relax
9856 \def\@pdfproducer{pdfTeX}%
9857 \ifx\eTeXversion\@undefined
9858 \else
9859 \ifx\eTeXversion\relax
9860 \else
9861 \ifnum\eTeXversion>0 %
9862 \def\@pdfproducer{pdfTeX}%
9863 \fi
9864 \fi
9865 \fi
9866 \ifx\pdfTeXversion\@undefined
9867 \else
9868 \ifnum\pdfTeXversion<100 %
9869 \edef\@pdfproducer{%
9870 \@pdfproducer
9871 \the\pdfTeXversion.\pdfTeXrevision
9872 }%
9873 \else
9874 \ifnum\pdfTeXversion<130 %
9875 \edef\@pdfproducer{%
9876 \@pdfproducer-%
9877 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9878 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9879 \pdfTeXrevision
9880 }%
9881 \else
9882 \ifnum\pdfTeXversion<140 %
9883 \else
9884 \def\@pdfproducer{pdfTeX}%
9885 \fi
9886 \edef\@pdfproducer{%
9887 \@pdfproducer-%
9888 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9889 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9890 \pdfTeXrevision
9891 }%
9892 \fi
9893 \fi
9894 \fi
9895 \else
9896 \begingroup
9897 \count@=\luatexversion
9898 \divide\count@ by 100 %
9899 \edef\x{\the\count@}%
9900 \count@=-\x\relax
9901 \multiply\count@ by 100 %
9902 \advance\count@ by \luatexversion

```

```

9903 \edef\x{\endgroup
9904 \def\noexpand\@pdfproducer{%
9905     LuaTeX-\x.\the\count@.\luatexrevision
9906 }%
9907 }%
9908 \x
9909 \fi
9910 \fi

```

\PDF@SetupDox

```

9911 \def\PDF@SetupDoc{%
9912 \ifx\@pdfpagescrop\@empty
9913 \else
9914 \edef\process@me{%
9915 \pdfpagesattr={%
9916 /CropBox[\@pdfpagescrop]%
9917 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9918 \else
9919 ^^J\the\pdfpagesattr
9920 \fi
9921 }%
9922 }%
9923 \process@me
9924 \fi
9925 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9926 \pdfcatalog{%
9927 /PageMode/\@pdfpagemode
9928 \ifx\@baseurl\@empty
9929 \else
9930 /URI<</Base(\Hy@pstringB)>>%
9931 \fi
9932 }%
9933 \ifx\@pdfstartpage\@empty
9934 \else
9935 \ifx\@pdfstartview\@empty
9936 \else
9937 openaction goto page\@pdfstartpage{\@pdfstartview}%
9938 \fi
9939 \fi
9940 \edef\Hy@temp{%
9941 \ifHy@pdftoolbar\else /HideToolbar true\fi
9942 \ifHy@pdfmenubar\else /HideMenubar true\fi
9943 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9944 \ifHy@pdffitwindow /FitWindow true\fi
9945 \ifHy@pdfcenterwindow /CenterWindow true\fi
9946 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9947 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9948 \Hy@UseNameKey{Direction}\@pdfdirection
9949 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9950 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9951 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9952 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9953 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9954 \Hy@UseNameKey{Duplex}\@pdfduplex
9955 \ifx\@pdfpicktraybypdfsize\@empty
9956 \else
9957 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9958 \fi

```

```

9959 \ifx\@pdfprintpagerange\@empty
9960 \else
9961 /PrintPageRange[\@pdfprintpagerange]%
9962 \fi
9963 \ifx\@pdfnumcopies\@empty
9964 \else
9965 /NumCopies \@pdfnumcopies
9966 \fi
9967 }%
9968 \pdfcatalog{%
9969 \ifx\Hy@temp\@empty
9970 \else
9971 /ViewerPreferences<<\Hy@temp>>%
9972 \fi
9973 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9974 \ifx\@pdflang\relax
9975 \else
9976 /Lang(\@pdflang)%
9977 \fi
9978 }%
9979 }

```

\PDF@FinishDoc

```

9980 \def\PDF@FinishDoc{%
9981 \pdf@ifdraftmode{ }{%
9982 \Hy@UseMaketitleInfos
9983 \HyInfo@GenerateAddons
9984 \pdfinfo{%
9985 /Author(\@pdfauthor)%
9986 /Title(\@pdftitle)%
9987 /Subject(\@pdfsubject)%
9988 /Creator(\@pdfcreator)%
9989 \ifx\@pdfcreationdate\@empty
9990 \else
9991 /CreationDate(\@pdfcreationdate)%
9992 \fi
9993 \ifx\@pdfmoddate\@empty
9994 \else
9995 /ModDate(\@pdfmoddate)%
9996 \fi
9997 \ifx\@pdfproducer\relax
9998 \else
9999 /Producer(\@pdfproducer)%
10000 \fi
10001 /Keywords(\@pdfkeywords)%
10002 \ifx\@pdftrapped\@empty
10003 \else
10004 /Trapped/\@pdftrapped
10005 \fi
10006 \HyInfo@Addons
10007 }%
10008 }%
10009 \Hy@DisableOption{pdfauthor}%
10010 \Hy@DisableOption{pdftitle}%
10011 \Hy@DisableOption{pdfsubject}%
10012 \Hy@DisableOption{pdfcreator}%
10013 \Hy@DisableOption{pdfcreationdate}%
10014 \Hy@DisableOption{pdfmoddate}%

```

```

10015 \Hy@DisableOption{pdfproducer}%
10016 \Hy@DisableOption{pdfkeywords}%
10017 \Hy@DisableOption{pdftrapped}%
10018 \Hy@DisableOption{pdfinfo}%
10019 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option pdfpage-
transition is used. First previous `/Trans` entries are removed. If a new `/Trans`
key exists, it is appended to `\pdfpageattr`.

```

10020 \def\hyper@pagetransition{%
10021   \ifx\@pdfpagetransition\relax
10022   \else
10023     \expandafter\Hy@RemoveTransPageAttr
10024     \the\pdfpageattr^^J/Trans{}>>\END
10025     \ifx\@pdfpagetransition\@empty
10026     \else
10027       \edef\@processme{%
10028         \global\pdfpageattr{%
10029           \the\pdfpageattr
10030             ^^J/Trans << /S /\@pdfpagetransition\space >>%
10031         }%
10032       }%
10033       \@processme
10034     \fi
10035   \fi
10036 }

```

`\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.

```

10037 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10038   \ifx\#2\%
10039     \global\pdfpageattr{#1}%
10040   \else
10041     \Hy@RemoveTransPageAttr#1#4\END
10042   \fi
10043 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option pdfpage-
duration is used. First previous `/Dur` entries are removed. If a new `/Dur` key
exists, it is appended to `\pdfpageattr`.

```

10044 \def\hyper@pageduration{%
10045   \ifx\@pdfpageduration\relax
10046   \else
10047     \expandafter
10048     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10049     \ifx\@pdfpageduration\@empty
10050     \else
10051       \edef\@processme{%
10052         \global\pdfpageattr{%
10053           \the\pdfpageattr
10054             ^^J/Dur \@pdfpageduration\space
10055         }%
10056       }%

```

```

10057 \@processme
10058 \fi
10059 \fi
10060 }

```

`\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.

```

10061 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10062 \ifx\#2\%
10063 \global\pdfpageattr{#1}%
10064 \else
10065 \Hy@RemoveDurPageAttr#1#4\END
10066 \fi
10067 }

```

`\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).

```

10068 \def\hyper@pagehidden{%
10069 \ifHy@useHidKey
10070 \expandafter
10071 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10072 \ifHy@pdfpagehidden
10073 \edef\@processme{%
10074 \global\pdfpageattr{%
10075 \the\pdfpageattr
10076 ^^J/Hid true % SPACE
10077 }%
10078 }%
10079 \@processme
10080 \fi
10081 \fi
10082 }

```

`\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.

```

10083 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10084 \ifx\#2\%
10085 \global\pdfpageattr{#1}%
10086 \else
10087 \Hy@RemoveHidPageAttr#1#4\END
10088 \fi
10089 }

10090 \pdf@ifdraftmode{}{%
10091 \g@addto@macro\Hy@EveryPageHook{%
10092 \hyper@pagetransition
10093 \hyper@pageduration
10094 \hyper@pagehidden
10095 }%
10096 }

```

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

```

10097 </pdftex>
10098 <*pdftex | xetex>
10099 \Hy@AtBeginDocument{%
10100   \ifHy@setpagesize
10101     \expandafter\@firstofone
10102   \else
10103     \expandafter\@gobble
10104   \fi
10105   {%
10106     \@ifclassloaded{seminar}{%
10107 <*pdftex>
10108   \setlength{\pdfhorigin}{1truein}%
10109   \setlength{\pdfvorigin}{1truein}%
10110 </pdftex>
10111   \ifportrait
10112     \ifdim\paperwidth=\z@
10113     \else
10114       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10115     \fi
10116     \ifdim\paperheight=\z@
10117     \else
10118       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10119     \fi
10120   \else
10121     \ifdim\paperheight=\z@
10122     \else
10123       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10124     \fi
10125     \ifdim\paperwidth=\z@
10126     \else
10127       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10128     \fi
10129   \fi
10130 }{%
10131   \ltx@ifundefined{stockwidth}{%
10132     \ifdim\paperwidth>\z@
10133     \setlength{\pdfpagewidth}{\paperwidth}%
10134     \fi
10135     \ifdim\paperheight>\z@
10136     \setlength{\pdfpageheight}{\paperheight}%
10137     \fi
10138   }{%
10139     \ifdim\stockwidth>\z@
10140     \setlength{\pdfpagewidth}{\stockwidth}%
10141     \fi
10142     \ifdim\stockheight>\z@
10143     \setlength{\pdfpageheight}{\stockheight}%
10144     \fi
10145   }%
10146 }%
10147 }%
10148 \Hy@DisableOption{setpagesize}%
10149 }
10150 </pdftex | xetex>
10151 <*pdftex>

```

```

10152 \def\Acrobatmenu#1#2{%
10153   \Hy@Acrobatmenu{#1}{#2}{%
10154     \leavevmode
10155     \EdefEscapeName\Hy@temp@menu{#1}%
10156     \pdfstartlink
10157     attr{%
10158       \Hy@setpdfborder
10159       \ifx\@pdfhighlight\@empty
10160       \else
10161         /H\@pdfhighlight
10162       \fi
10163       \ifx\@menubordercolor\relax
10164       \else
10165         /C[\@menubordercolor]%
10166       \fi
10167     }%
10168     user{%
10169       /Subtype/Link%
10170       \ifHy@pdfa /F 4\fi
10171       /A<<%
10172         /S/Named%
10173         /N/\Hy@temp@menu
10174         \Hy@href@nextactionraw
10175       >>%
10176     }%
10177     \relax
10178     \Hy@colorlink\@menucolor#2%
10179     \close@pdflink
10180   }%
10181 }

```

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.

```

10182 \def\Hy@FixNotFirstPage{%
10183   \gdef\Hy@FixNotFirstPage{%
10184     \setbox\AtBeginShipoutBox=\hbox{%
10185       \copy\AtBeginShipoutBox
10186     }%
10187   }%
10188 }
10189 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10190 }{%
10191   \AtBeginShipout{\Hy@FixNotFirstPage}%
10192 }
10193 \</pdfTeX>

```

47.3 hypertex

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

href: html:

name: html:

end: html:

image: html:

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

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is 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.

```
10194 \*hypertex>
10195 \providecommand*\XR@ext{}\dvi}
10196 \let\PDF@FinishDoc\ltx@empty
10197 \def\PDF@SetupDoc{%
10198   \ifx\@baseurl\@empty
10199   \else
10200     \special{html:<base href="\@baseurl">}%
10201   \fi
10202 }
10203 \Hy@WrapperDef\hyper@anchor#1{%
10204   \Hy@SaveLastskip
10205   \Hy@VerboseAnchor{#1}%
10206   \begingroup
10207     \let\protect=\string
10208     \hyper@chars
10209     \special{html:<a name=%
10210       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10211   \endgroup
10212   \Hy@activeanchortrue
10213   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10214   \special{html:</a>}%
10215   \Hy@activeanchorfalse
10216   \Hy@RestoreLastskip
```

```

10217 }
10218 \Hy@WrapperDef\hyper@anchorstart#1{%
10219 \Hy@SaveLastskip
10220 \Hy@VerboseAnchor{#1}%
10221 \begingroup
10222 \hyper@chars
10223 \special{html:<a name=%
10224 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10225 \endgroup
10226 \Hy@activeanchortrue
10227 }
10228 \def\hyper@anchorend{%
10229 \special{html:</a>}%
10230 \Hy@activeanchorfals
10231 \Hy@RestoreLastskip
10232 }
10233 \def\@urltype{url}
10234 \def\hyper@linkstart#1#2{%
10235 \Hy@VerboseLinkStart{#1}{#2}%
10236 \expandafter\Hy@colorlink\csname @#1color\endcsname
10237 \def\Hy@tempa{#1}%
10238 \ifx\Hy@tempa\@urltype
10239 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10240 \else
10241 \begingroup
10242 \hyper@chars
10243 \special{html:<a href=%
10244 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10245 \endgroup
10246 \fi
10247 }
10248 \def\hyper@linkend{%
10249 \special{html:</a>}%
10250 \Hy@endcolorlink
10251 }
10252 \def\hyper@linkfile#1#2#3{%
10253 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10254 }
10255 \def\hyper@linkurl#1#2{%

```

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

```

10256 \leavevmode
10257 \ifHy@raiselinks
10258 \Hy@SaveSpaceFactor
10259 \Hy@SaveSavedSpaceFactor
10260 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10261 \Hy@RestoreSavedSpaceFactor
10262 \@linkdim\dp\@tempboxa
10263 \lower\@linkdim\hbox{%
10264 \hyper@chars
10265 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10266 }%
10267 \Hy@colorlink\@urlcolor
10268 \Hy@RestoreSpaceFactor
10269 #1%
10270 \Hy@SaveSpaceFactor

```

```
10271 \linkdim\ht\@tempboxa
```

Because of the interaction with the dvilhs processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```
10272 \advance\linkdim by -6.5\p@
10273 \raise\linkdim\hbox{\special{html:</a>}}%
10274 \Hy@endcolorlink
10275 \Hy@RestoreSpaceFactor
10276 \else
10277 \begingroup
10278 \hyper@chars
10279 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10280 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10281 \special{html:</a>}%
10282 \Hy@endcolorlink
10283 \endgroup
10284 \fi
10285 }
```

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

```
10286 \def\hyper@link#1#2#3{%
10287 \Hy@VerboseLinkStart{#1}{#2}%
10288 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10289 }

10290 \def\hyper@image#1#2{%
10291 \begingroup
10292 \hyper@chars
10293 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10294 \endgroup
10295 }
10296 </hypertex>
10297 <*\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`, \TeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```
10298 \providecommand*\XR@ext{dvi}
10299 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10300 \Hy@WrapperDef\hyper@anchor#1{%
10301 \Hy@SaveLastskip
10302 \Hy@VerboseAnchor{#1}%
10303 \begingroup
10304 \let\protect=\string
10305 \special{mark: #1}%
10306 \endgroup
```

```

10307 \Hy@activeanchortrue
10308 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10309 \Hy@activeanchorfalse
10310 \Hy@RestoreLastskip
10311 }
10312 \Hy@WrapperDef\hyper@anchorstart#1{%
10313 \Hy@SaveLastskip
10314 \Hy@VerboseAnchor{#1}%
10315 \special{mark: #1}%
10316 \Hy@activeanchortrue
10317 }
10318 \def\hyper@anchorend{%
10319 \Hy@activeanchorfalse
10320 \Hy@RestoreLastskip
10321 }
10322 \def\hyper@linkstart#1#2{%
10323 \Hy@VerboseLinkStart{#1}{#2}%
10324 \expandafter\Hy@colorlink\csname @#1color\endcsname
10325 \special{button: %
10326 10000000 %
10327 \number\baselineskip\space
10328 #2%
10329 }%
10330 }
10331 \def\hyper@linkend{%
10332 \Hy@endcolorlink
10333 }
10334 \def\hyper@link#1#2#3{%
10335 \Hy@VerboseLinkStart{#1}{#2}%
10336 \leavevmode
10337 \ifHy@raiselinks
10338 \Hy@SaveSpaceFactor
10339 \Hy@SaveSavedSpaceFactor
10340 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10341 \Hy@RestoreSavedSpaceFactor
10342 \@linkdim\dp\@tempboxa
10343 \lower\@linkdim\hbox{%
10344 \special{button: %
10345 \number\wd\@tempboxa\space
10346 \number\ht\@tempboxa\space
10347 #2%
10348 }%
10349 \expandafter\Hy@colorlink\csname @#1color\endcsname
10350 \Hy@RestoreSpaceFactor
10351 #3\Hy@xspace@end
10352 \Hy@SaveSpaceFactor
10353 \Hy@endcolorlink
10354 }%
10355 \@linkdim\ht\@tempboxa
10356 \advance\@linkdim by -6.5\p@
10357 \raise\@linkdim\hbox{}}%
10358 \Hy@RestoreSpaceFactor
10359 \else
10360 \special{button: %
10361 \number\wd\@tempboxa\space
10362 \number\ht\@tempboxa\space
10363 #2%

```

```

10364 }%
10365 \expandafter\Hy@colorlink\csname @#1color\endcsname
10366 #3\Hy@xspace@end
10367 \Hy@endcolorlink
10368 \fi
10369 }
10370 \def\hyper@linkurl#1#2{%
10371 \begingroup
10372 \hyper@chars
10373 \leavevmode
10374 \ifHy@raiselinks
10375 \Hy@SaveSpaceFactor
10376 \Hy@SaveSavedSpaceFactor
10377 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10378 \Hy@RestoreSavedSpaceFactor
10379 \@linkdim\dp\@tempboxa
10380 \lower\@linkdim\hbox{%
10381 \special{button: %
10382 \number\wd\@tempboxa\space
10383 \number\ht\@tempboxa\space
10384 launch: \wwwbrowser\space
10385 #2%
10386 }%
10387 \Hy@colorlink\@urlcolor
10388 \Hy@RestoreSpaceFactor
10389 #1\Hy@xspace@end
10390 \Hy@SaveSpaceFactor
10391 \Hy@endcolorlink
10392 }%
10393 \@linkdim\ht\@tempboxa
10394 \advance\@linkdim by -6.5\p@
10395 \raise\@linkdim\hbox{}%
10396 \Hy@RestoreSpaceFactor
10397 \else
10398 \special{button: %
10399 \number\wd\@tempboxa\space
10400 \number\ht\@tempboxa\space
10401 launch: \wwwbrowser\space
10402 #2%
10403 }%
10404 \Hy@colorlink\@urlcolor
10405 #1\Hy@xspace@end
10406 \Hy@endcolorlink
10407 \fi
10408 \endgroup
10409 }
10410 \def\hyper@linkfile#1#2#3{%
10411 \begingroup
10412 \hyper@chars
10413 \leavevmode
10414 \ifHy@raiselinks
10415 \Hy@SaveSpaceFactor
10416 \Hy@SaveSavedSpaceFactor
10417 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10418 \Hy@RestoreSavedSpaceFactor
10419 \@linkdim\dp\@tempboxa
10420 \lower\@linkdim\hbox{%

```

```

10421 \special{button: %
10422 \number\wd\@tempboxa\space
10423 \number\ht\@tempboxa\space
10424 #3,%
10425 file: #2%
10426 }%
10427 \Hy@colorlink\@filecolor
10428 \Hy@RestoreSpaceFactor
10429 #1\Hy@xspace@end
10430 \Hy@SaveSpaceFactor
10431 \Hy@endcolorlink
10432 }%
10433 \@linkdim\ht\@tempboxa
10434 \advance\@linkdim by -6.5\p@
10435 \raise\@linkdim\hbox{}%
10436 \Hy@RestoreSpaceFactor
10437 \else
10438 \special{button: %
10439 \number\wd\@tempboxa\space
10440 \number\ht\@tempboxa\space
10441 #3,%
10442 file: #2%
10443 }%
10444 \Hy@colorlink\@filecolor
10445 #1\Hy@xspace@end
10446 \Hy@endcolorlink
10447 \fi
10448 \endgroup
10449 }
10450 \ifx\@pdfproducer\relax
10451 \def\@pdfproducer{dviwindo + Distiller}%
10452 \fi
10453 \HyInfo@AddonUnsupportedtrue
10454 \def\PDF@FinishDoc{%
10455 \Hy@UseMaketitleInfos
10456 \HyInfo@TrappedUnsupported
10457 \special{PDF: Keywords \@pdfkeywords}%
10458 \special{PDF: Title \@pdftitle}%
10459 \special{PDF: Creator \@pdfcreator}%
10460 \ifx\@pdfcreationdate\@empty
10461 \else
10462 \special{PDF: CreationDate \@pdfcreationdate}%
10463 \fi
10464 \ifx\@pdfmoddate\@empty
10465 \else
10466 \special{PDF: ModDate \@pdfmoddate}%
10467 \fi
10468 \special{PDF: Author \@pdfauthor}%
10469 \ifx\@pdfproducer\relax
10470 \else
10471 \special{PDF: Producer \@pdfproducer}%
10472 \fi
10473 \special{PDF: Subject \@pdfsubject}%
10474 \Hy@DisableOption{pdfauthor}%
10475 \Hy@DisableOption{pdftitle}%
10476 \Hy@DisableOption{pdfsubject}%
10477 \Hy@DisableOption{pdfcreator}%

```

```

10478 \Hy@DisableOption{pdfcreationdate}%
10479 \Hy@DisableOption{pdfmoddate}%
10480 \Hy@DisableOption{pdfproducer}%
10481 \Hy@DisableOption{pdfkeywords}%
10482 \Hy@DisableOption{pdftrapped}%
10483 \Hy@DisableOption{pdfinfo}%
10484 }
10485 \def\PDF@SetupDoc{%
10486 \ifx\@baseurl\@empty
10487 \else
10488 \special{PDF: Base \@baseurl}%
10489 \fi
10490 \ifx\@pdfpagescrop\@empty\else
10491 \special{PDF: BBox \@pdfpagescrop}%
10492 \fi
10493 \def\Hy@temp{}%
10494 \ifx\@pdfstartpage\@empty
10495 \else
10496 \ifx\@pdfstartview\@empty
10497 \else
10498 \edef\Hy@temp{%
10499 ,Page=\@pdfstartpage
10500 ,View=\@pdfstartview
10501 }%
10502 \fi
10503 \fi
10504 \edef\Hy@temp{%
10505 \noexpand\pdfmark{%
10506 pdfmark=/DOCVIEW,%
10507 PageMode=/\@pdfpagemode
10508 \Hy@temp
10509 }%
10510 }%
10511 \Hy@temp
10512 \ifx\@pdfpagescrop\@empty
10513 \else
10514 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10515 \fi
10516 \edef\Hy@temp{%
10517 \ifHy@pdftoolbar\else /HideToolbar true\fi
10518 \ifHy@pdfmenubar\else /HideMenubar true\fi
10519 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10520 \ifHy@pdfwindow /FitWindow true\fi
10521 \ifHy@pdfcenterwindow /CenterWindow true\fi
10522 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10523 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10524 \Hy@UseNameKey{Direction}\@pdfdirection
10525 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10526 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10527 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10528 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10529 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10530 \Hy@UseNameKey{Duplex}\@pdfduplex
10531 \ifx\@pdfpicktraybypdfsize\@empty
10532 \else
10533 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10534 \fi

```

```

10535 \ifx\@pdfprintpagerange\@empty
10536 \else
10537 /PrintPageRange[\@pdfprintpagerange]%
10538 \fi
10539 \ifx\@pdfnumcopies\@empty
10540 \else
10541 /NumCopies \@pdfnumcopies
10542 \fi
10543 }%
10544 \pdfmark{pdfmark=/PUT,%
10545 Raw={%
10546 \string{Catalog\string}<<%
10547 \ifx\Hy@temp\@empty
10548 \else
10549 /ViewerPreferences<<\Hy@temp>>%
10550 \fi
10551 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10552 \ifx\@pdflang\relax
10553 \else
10554 /Lang(\@pdflang)%
10555 \fi
10556 >>%
10557 }%
10558 }%
10559 }
10560 </dviwindo>
10561 <*dvipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10562 \providecommand*\XR@ext}{pdf}
10563 \Hy@setbreaklinks{true}
10564 \def\HyPat@ObjRef{%
10565   @[\^ ]+}%
10566 }
10567 \newsavebox{\pdfm@box}
10568 \def\@pdfm@mark#1{\special{pdf:#1}}
10569 \Hy@WrapperDef\@pdfm@dest#1{%
10570   \Hy@SaveLastskip
10571   \Hy@VerboseAnchor{#1}%
10572   \begingroup
10573     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10574     \def\x{XYZ}%
10575     \ifx\x\@pdfview
10576       \def\x{XYZ @xpos @ypos null}%
10577     \else
10578       \def\x{FitH}%
10579       \ifx\x\@pdfview
10580         \def\x{FitH @ypos}%
10581       \else
10582         \def\x{FitBH}%
10583         \ifx\x\@pdfview
10584           \def\x{FitBH @ypos}%
10585         \else
10586           \def\x{FitV}%
10587         \ifx\x\@pdfview

```

```

10588     \def\x{FitV @xpos}%
10589     \else
10590     \def\x{FitBV}%
10591     \ifx\x\@pdfview
10592     \def\x{FitBV @xpos}%
10593     \else
10594     \def\x{Fit}%
10595     \ifx\x\@pdfview
10596     \let\x\@pdfview
10597     \else
10598     \def\x{FitB}%
10599     \ifx\x\@pdfview
10600     \let\x\@pdfview
10601     \else
10602     \def\x{FitR}%
10603     \ifx\x\@pdfview
10604     \Hy@Warning{'pdfview=FitR' is not supported}%
10605     \def\x{XYZ @xpos @ypos null}%
10606     \else
10607     \@onelevel@sanitize\@pdfview
10608     \Hy@Warning{%
10609       Unknown value '\@pdfview' for pdfview%
10610     }%
10611     \def\x{XYZ @xpos @ypos null}%
10612     \fi
10613     \fi
10614     \fi
10615     \fi
10616     \fi
10617     \fi
10618     \fi
10619     \fi
10620     \@pdfm@mark{dest (\Hy@pstringDest) [atthispage /\x]}%
10621     \endgroup
10622     \Hy@RestoreLastskip
10623 }
10624 \providecommand*\@pdfview{XYZ}
10625 \providecommand*\@pdfborder{0 0 1}
10626 \providecommand*\@pdfborderstyle{}
10627 \def\hyper@anchor#1{%
10628   \@pdfm@dest{#1}%
10629 }
10630 \def\hyper@anchorstart#1{%
10631   \Hy@activeanchortrue
10632   \@pdfm@dest{#1}%
10633 }
10634 \def\hyper@anchorend{%
10635   \Hy@activeanchorfalse
10636 }
10637 \newcounter{Hy@AnnotLevel}
10638 \ifHy@ocgcolorlinks
10639   \def\OBJ@OCG@view{@OCG@view}%
10640   \@pdfm@mark{%
10641     obj \OBJ@OCG@view <<%
10642     /Type/OCG%
10643     /Name(View)%
10644     /Usage<<%

```

```

10645      /Print<<%
10646      /PrintState/OFF%
10647      >>%
10648      /View<<%
10649      /ViewState/ON%
10650      >>%
10651      >>%
10652      >>%
10653      }%
10654      \@pdfm@mark{close \OBJ@OCG@view}%
10655      \def\OBJ@OCG@print{@OCG@print}%
10656      \@pdfm@mark{%
10657      obj \OBJ@OCG@print <<%
10658      /Type/OCG%
10659      /Name(Print)%
10660      /Usage<<%
10661      /Print<<%
10662      /PrintState/ON%
10663      >>%
10664      /View<<%
10665      /ViewState/OFF%
10666      >>%
10667      >>%
10668      >>%
10669      }%
10670      \@pdfm@mark{close \OBJ@OCG@print}%
10671      \def\OBJ@OCGs{@OCGs}%
10672      \@pdfm@mark{%
10673      obj \OBJ@OCGs [%
10674      \OBJ@OCG@view\space\OBJ@OCG@print
10675      ]%
10676      }%
10677      \@pdfm@mark{close \OBJ@OCGs}%
10678      \@pdfm@mark{%
10679      put @catalog <<%
10680      /OCProperties<<%
10681      /OCGs \OBJ@OCGs
10682      /D<<%
10683      /OFF[\OBJ@OCG@print]%
10684      /AS[%
10685      <<%
10686      /Event/View%
10687      /OCGs \OBJ@OCGs
10688      /Category[/View]%
10689      >>%
10690      <<%
10691      /Event/Print%
10692      /OCGs \OBJ@OCGs
10693      /Category[/Print]%
10694      >>%
10695      <<%
10696      /Event/Export%
10697      /OCGs \OBJ@OCGs
10698      /Category[/Print]%
10699      >>%
10700      ]%
10701      >>%

```

```

10702    >>%
10703    >>%
10704    }%
10705    \AtBeginShipout{%
10706      \setbox\AtBeginShipoutBox=\hbox{%
10707        \copy\AtBeginShipoutBox
10708        \@pdfm@mark{%
10709          put @resources <<%
10710            /Properties<<%
10711            /OCView \OBJ@OCG@view
10712            /OCPrint \OBJ@OCG@print
10713          >>%
10714          >>%
10715        }%
10716      }%
10717    }%
10718    \Hy@AtBeginDocument{%
10719      \def\Hy@colorlink#1{%
10720        \begingroup
10721          \ifHy@ocgcolorlinks
10722            \def\Hy@ocgcolor{#1}%
10723            \setbox0=\hbox\bgroup\color@begingroup
10724          \else
10725            \HyColor@UseColor#1%
10726          \fi
10727        }%
10728      \def\Hy@endcolorlink{%
10729        \ifHy@ocgcolorlinks
10730          \color@endgroup\egroup
10731          \mbox{%
10732            \@pdfm@mark{content /OC/OCPrint BDC}%
10733            \rlap{\copy0}%
10734            \@pdfm@mark{content EMC/OC/OCView BDC}%
10735          \begingroup
10736            \expandafter\HyColor@UseColor\Hy@ocgcolor
10737            \box0 %
10738          \endgroup
10739          \@pdfm@mark{content EMC}%
10740        }%
10741      \fi
10742    \endgroup
10743    }%
10744    }%
10745    \else
10746      \Hy@DisableOption{ocgcolorlinks}%
10747    \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10748 \def\Hy@BeginAnnot#1{%
10749   \global\advance\c@Hy@AnnotLevel\@ne
10750   \ifnum\c@Hy@AnnotLevel=\@ne
10751     #1%
10752   \fi
10753 }
10754 \def\Hy@endAnnot{%
10755   \ifnum\value{Hy@AnnotLevel}=\@ne
10756     \Hy@endcolorlink

```

```

10757 \pdfmark@mark{eann}%
10758 \fi
10759 \global\advance\c@Hy@AnnotLevel\m@ne
10760 }

10761 \def\Hy@undefinedname{UNDEFINED}
10762 \def\hyper@linkstart#1#2{%
10763 \Hy@VerboseLinkStart{#1}{#2}%
10764 \leavevmode
10765 \Hy@BeginAnnot{%
10766 \protected@edef\Hy@testname{#2}%
10767 \ifx\Hy@testname\@empty
10768 \Hy@Warning{%
10769 Empty destination name,\MessageBreak
10770 using '\Hy@undefinedname'%
10771 }%
10772 \let\Hy@testname\Hy@undefinedname
10773 \else
10774 \Hy@pstringdef\Hy@testname{%
10775 \expandafter\HyperDestNameFilter\expandafter{%
10776 \Hy@testname
10777 }%
10778 }%
10779 \fi
10780 \pdfmark@mark{%
10781 bann<<%
10782 /Type/Annot%
10783 /Subtype/Link%
10784 \ifHy@pdfa /F 4\fi
10785 \Hy@setpdfborder
10786 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10787 \else
10788 /C[\csname @#1bordercolor\endcsname]%
10789 \fi
10790 /A<<%
10791 /S/GoTo%
10792 /D(\Hy@testname)%
10793 \Hy@href@nextactionraw
10794 >>%
10795 >>%
10796 }%
10797 \expandafter\Hy@colorlink\csname @#1color\endcsname
10798 }%
10799 }

10800 \def\hyper@linkend{\Hy@EndAnnot}%
10801 \def\hyper@link#1#2#3{%
10802 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10803 }

10804 \def\hyper@linkfile#1#2#3{%
10805 \leavevmode
10806 \Hy@BeginAnnot{%
10807 \def\Hy@pstringF{#2}%
10808 \Hy@CleanupFile\Hy@pstringF
10809 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10810 \Hy@pstringdef\Hy@pstringD{#3}%
10811 \Hy@MakeRemoteAction
10812 \pdfmark@mark{%
10813 bann<<%

```

```

10814 /Type/Annot%
10815 /Subtype/Link%
10816 \ifHy@pdfa /F 4\fi
10817 \Hy@setpdfborder
10818 \ifx\@filebordercolor\relax
10819 \else
10820 /C[\@filebordercolor]%
10821 \fi
10822 /A<<%
10823 /S/GoToR%
10824 /F(\Hy@pstringF)%
10825 /D%
10826 \ifx\#3\%
10827 [\Hy@href@page\@pdfremotestartview]%
10828 \else
10829 (\Hy@pstringD)%
10830 \fi
10831 \Hy@SetNewWindow
10832 \Hy@href@nextactionraw
10833 >>%
10834 >>%
10835 }%
10836 \Hy@colorlink\@filecolor
10837 }%
10838 #1\Hy@xspace@end
10839 \Hy@EndAnnot
10840 }
10841 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10842 \leavevmode
10843 \Hy@BeginAnnot{%
10844 \Hy@pstringdef\Hy@pstringF{#1}%
10845 \Hy@pstringdef\Hy@pstringP{#3}%
10846 \@pdfm@mark{%
10847 bann<<%
10848 /Type/Annot%
10849 /Subtype/Link%
10850 \ifHy@pdfa /F 4\fi
10851 \Hy@setpdfborder
10852 \ifx\@runbordercolor\relax
10853 \else
10854 /C[\@runbordercolor]%
10855 \fi
10856 /A<<%
10857 /F(\Hy@pstringF)%
10858 /S/Launch%
10859 \Hy@SetNewWindow
10860 \ifx\#3\%
10861 \else
10862 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10863 \fi
10864 \Hy@href@nextactionraw
10865 >>%
10866 >>%
10867 }%
10868 \Hy@colorlink\@runcolor
10869 }%
10870 #2\Hy@xspace@end

```

```

10871 \Hy@EndAnnot
10872 }
10873 \def\hyper@linkurl#1#2{%
10874 \leavevmode
10875 \Hy@BeginAnnot{%
10876 \Hy@pstringdef\Hy@pstringURI{#2}%
10877 \@pdfm@mark{%
10878 bann<<%
10879 /Type/Annot%
10880 /Subtype/Link%
10881 \ifHy@pdfa /F 4\fi
10882 \Hy@setpdfborder
10883 \ifx\@urlbordercolor\relax
10884 \else
10885 /C[\@urlbordercolor]%
10886 \fi
10887 /A<<%
10888 /S/URI%
10889 /URI(\Hy@pstringURI)%
10890 \ifHy@href@ismap
10891 /IsMap true%
10892 \fi
10893 \Hy@href@nextactionraw
10894 >>%
10895 >>%
10896 }%
10897 \Hy@colorlink\@urlcolor
10898 }%
10899 #1\Hy@xspace@end
10900 \Hy@EndAnnot
10901 }
10902 \def\Acrobatmenu#1#2{%
10903 \Hy@Acrobatmenu{#1}{#2}{%
10904 \Hy@BeginAnnot{%
10905 \EdefEscapeName\Hy@temp@menu{#1}%
10906 \@pdfm@mark{%
10907 bann<<%
10908 /Type/Annot%
10909 /Subtype/Link%
10910 \ifHy@pdfa /F 4\fi
10911 \Hy@setpdfborder
10912 \ifx\@menubordercolor\relax
10913 \else
10914 /C[\@menubordercolor]%
10915 \fi
10916 /A<<%
10917 /S/Named%
10918 /N/\Hy@temp@menu
10919 \Hy@href@nextactionraw
10920 >>%
10921 >>%
10922 }%
10923 \Hy@colorlink\@menucolor
10924 }%
10925 #2\Hy@xspace@end
10926 \Hy@EndAnnot
10927 }%

```

```

10928 }
10929 \ifx\@pdfproducer\relax
10930 \def\@pdfproducer{dvipdfm}%

```

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

```

10931 \begingroup\expandafter\expandafter\expandafter\endgroup
10932 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10933 \else
10934 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10935 \fi
10936 \fi
10937 \def\PDF@FinishDoc{%
10938 \Hy@UseMaketitleInfos
10939 \HyInfo@GenerateAddons
10940 \@pdfm@mark{%
10941 docinfo<<%
10942 /Title(\@pdftitle)%
10943 /Subject(\@pdfsubject)%
10944 /Creator(\@pdfcreator)%
10945 \ifx\@pdfcreationdate\@empty
10946 \else
10947 /CreationDate(\@pdfcreationdate)%
10948 \fi
10949 \ifx\@pdfmoddate\@empty
10950 \else
10951 /ModDate(\@pdfmoddate)%
10952 \fi
10953 /Author(\@pdfauthor)%
10954 \ifx\@pdfproducer\relax
10955 \else
10956 /Producer(\@pdfproducer)%
10957 \fi
10958 /Keywords(\@pdfkeywords)%
10959 \ifx\@pdftrapped\@empty
10960 \else
10961 /Trapped/\@pdftrapped
10962 \fi
10963 \HyInfo@Addons
10964 >>%
10965 }%
10966 \Hy@DisableOption{pdfauthor}%
10967 \Hy@DisableOption{pdftitle}%
10968 \Hy@DisableOption{pdfsubject}%
10969 \Hy@DisableOption{pdfcreator}%
10970 \Hy@DisableOption{pdfcreationdate}%
10971 \Hy@DisableOption{pdfmoddate}%
10972 \Hy@DisableOption{pdfproducer}%
10973 \Hy@DisableOption{pdfkeywords}%
10974 \Hy@DisableOption{pdftrapped}%
10975 \Hy@DisableOption{pdfinfo}%
10976 }
10977 \def\PDF@SetupDoc{%
10978 \edef\Hy@temp{%
10979 \ifHy@pdftoolbar\else /HideToolbar true\fi
10980 \ifHy@pdfmenubar\else /HideMenubar true\fi
10981 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10982 \ifHy@pdfitwindow /FitWindow true\fi

```

```

10983 \ifHy@pdfcenterwindow /CenterWindow true\fi
10984 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10985 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10986 \Hy@UseNameKey{Direction}\@pdfdirection
10987 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10988 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10989 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10990 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10991 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10992 \Hy@UseNameKey{Duplex}\@pdfduplex
10993 \ifx\@pdfpicktraybypdfsize\@empty
10994 \else
10995 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10996 \fi
10997 \ifx\@pdfprintpagerange\@empty
10998 \else
10999 /PrintPageRange[\@pdfprintpagerange]%
11000 \fi
11001 \ifx\@pdfnumcopies\@empty
11002 \else
11003 /NumCopies \@pdfnumcopies
11004 \fi
11005 }%
11006 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11007 \@pdfm@mark{%
11008 docview<<%
11009 \ifx\@pdfstartpage\@empty
11010 \else
11011 \ifx\@pdfstartview\@empty
11012 \else
11013 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11014 \fi
11015 \fi
11016 \ifx\@baseurl\@empty
11017 \else
11018 /URI<</Base(\Hy@pstringB)>>%
11019 \fi
11020 /PageMode/\@pdfpagemode
11021 \ifx\Hy@temp\@empty
11022 \else
11023 /ViewerPreferences<<\Hy@temp>>%
11024 \fi
11025 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11026 \ifx\@pdflang\relax
11027 \else
11028 /Lang(\@pdflang)%
11029 \fi
11030 >>%
11031 }%
11032 \ifx\@pdfpagescrop\@empty
11033 \else
11034 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11035 \fi
11036 }
11037 </dvipdfm | xetex>
11038 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

11039 \def\hyper@pagetransition{%
11040   \ifx\@pdfpagetransition\relax
11041   \else
11042     \ifx\@pdfpagetransition\@empty
11043     \else
11044       \special{pdf:put @thispage %
11045         <</Trans<</S/\@pdfpagetransition>>>>%
11046       }%
11047     \fi
11048   \fi
11049 }
```

\hyper@pageduration

```

11050 \def\hyper@pageduration{%
11051   \ifx\@pdfpageduration\relax
11052   \else
11053     \ifx\@pdfpageduration\@empty
11054     \else
11055       \special{pdf:put @thispage %
11056         <</Dur \@pdfpageduration>>>%
11057     }%
11058   \fi
11059 \fi
11060 }
```

\hyper@pagehidden

```

11061 \def\hyper@pagehidden{%
11062   \ifHy@useHidKey
11063     \special{pdf:put @thispage %
11064       <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11065     }%
11066   \fi
11067 }

11068 \g@addto@macro\Hy@EveryPageBoxHook{%
11069   \hyper@pagetransition
11070   \hyper@pageduration
11071   \hyper@pagehidden
11072 }

11073 </dvipdfm | xetex>
```

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

```

11074 <(*dvipdfm)
11075 \AtBeginShipoutFirst{%
11076   \ifHy@setpagesize
11077     \begingroup
11078     \@ifundefined{stockwidth}{%
11079       \ifdim\paperwidth>\z@
11080       \ifdim\paperheight>\z@
11081         \special{papersize=\the\paperwidth,\the\paperheight}%
11082       \fi
11083     \fi
11084   }{%
11085     \ifdim\stockwidth>\z@
11086     \ifdim\stockheight>\z@
```

```

11087         \special{papersize=\the\stockwidth,\the\stockheight}%
11088     \fi
11089 \fi
11090 }%
11091 \endgroup
11092 \fi
11093 \Hy@DisableOption{setpagesize}%
11094 }
11095 </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.

```

11096 <*vtexhtml>
11097 \providecommand*{\XR@ext}{htm}
11098 \RequirePackage{vtexhtml}
11099 \newif\if@Localurl
11100 \let\PDF@FinishDoc\tx@empty
11101 \def\PDF@SetupDoc{%
11102     \ifx\@baseurl\@empty
11103     \else
11104         \special{!direct <base href="\@baseurl">}%
11105     \fi
11106 }
11107 \def\@urltype{url}
11108 \def\hyper@link#1#2#3{%
11109     \Hy@VerboseLinkStart{#1}{#2}%
11110     \leavevmode
11111     \special{!direct <a href=%
11112         \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11113     #3\Hy@xspace@end
11114     \special{!direct </a>}%
11115 }
11116 \def\hyper@linkurl#1#2{%
11117     \begingroup
11118         \hyper@chars
11119         \leavevmode
11120         \MathBSuppress=1\relax
11121         \special{!direct <a href=%
11122             \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11123         #1\Hy@xspace@end
11124         \MathBSuppress=0\relax
11125         \special{!direct </a>}%
11126     \endgroup
11127 }
11128 \def\hyper@linkfile#1#2#3{%
11129     \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11130 }
11131 \def\hyper@linkstart#1#2{%
11132     \Hy@VerboseLinkStart{#1}{#2}%
11133     \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11134         \@Localurltrue
11135         \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11136     \else
11137         \@Localurlfalse
11138     \begingroup

```

```

11139     \hyper@chars
11140     \special{!aref \HyperDestNameFilter{#2}}%
11141   \endgroup
11142 \fi
11143 }
11144 \def\hyper@linkend{%
11145   \if@Localurl
11146     \special{!endaref}%
11147   \else
11148     \special{!direct </a>}%
11149   \fi
11150 }
11151 \Hy@WrapperDef\hyper@anchorstart#1{%
11152   \Hy@SaveLastskip
11153   \Hy@VerboseAnchor{#1}%
11154   \begingroup
11155     \hyper@chars
11156     \special{!aname #1}%
11157     \special{!direct <a name=%
11158       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11159   \endgroup
11160   \Hy@activeanchortrue
11161 }
11162 \def\hyper@anchorend{%
11163   \special{!direct </a>}%
11164   \Hy@activeanchorfalse
11165   \Hy@RestoreLastskip
11166 }
11167 \Hy@WrapperDef\hyper@anchor#1{%
11168   \Hy@SaveLastskip
11169   \Hy@VerboseAnchor{#1}%
11170   \begingroup
11171     \let\protect=\string
11172     \hyper@chars
11173     \leavevmode
11174     \special{!aname #1}%
11175     \special{!direct <a name=%
11176       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11177   \endgroup
11178   \Hy@activeanchortrue
11179   \bgroup\anchor@spot\egroup
11180   \special{!direct </a>}%
11181   \Hy@activeanchorfalse
11182   \Hy@RestoreLastskip
11183 }
11184 \def\@Form[#1]{%
11185   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11186 }
11187 \let\@endForm\ltx@empty
11188 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11189   \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11190 }
11191 \def\@TextField[#1]#2{% parameters, label
11192   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11193 }
11194 \def\@CheckBox[#1]#2{% parameters, label
11195   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%

```

```

11196 }
11197 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11198   \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11199 }
11200 \def\@PushButton[#1]#2{% parameters, label
11201   \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11202 }
11203 \def\@Reset[#1]#2{%
11204   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11205 }
11206 \def\@Submit[#1]#2{%
11207   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11208 }
11209 </vtexhtml>
11210 <*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.

```

11211 \ifx\mediaheight\@undefined
11212 \else
11213   \ifx\mediaheight\relax
11214   \else
11215     \ifHy@setpagesize
11216       \providecommand*\VTeXInitMediaSize{%
11217         \ltx@ifundefined{stockwidth}{%
11218           \ifdim\paperheight>0pt %
11219             \setlength\mediaheight\paperheight
11220           \fi
11221           \ifdim\paperheight>0pt %
11222             \setlength\mediawidth\paperwidth
11223           \fi
11224         }{%
11225           \ifdim\stockheight>0pt %
11226             \setlength\mediaheight\stockheight
11227           \fi
11228           \ifdim\stockwidth>0pt %
11229             \setlength\mediawidth\stockwidth
11230           \fi
11231         }%
11232       }%
11233     \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11234   \fi
11235   \Hy@DisableOption{setpagesize}%
11236 \fi
11237 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

11238 \providecommand*\@pdfview{xyz}
11239 \providecommand*\@pdfborder{0 0 1}
11240 \providecommand*\@pdfborderstyle{}
11241 \let\CurrentBorderColor\@linkbordercolor
11242 \Hy@WrapperDef\hyper@anchor#1{%
11243   \Hy@SaveLastskip
11244   \Hy@VerboseAnchor{#1}%
11245   \begingroup
11246     \let\protect=\string
11247     \hyper@chars

```

```

11248 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11249 \endgroup
11250 \Hy@activeanchortrue
11251 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11252 \Hy@activeanchorfalse
11253 \Hy@RestoreLastskip
11254 }
11255 \Hy@WrapperDef\hyper@anchorstart#1{%
11256 \Hy@SaveLastskip
11257 \Hy@VerboseAnchor{#1}%
11258 \begingroup
11259 \hyper@chars
11260 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11261 \endgroup
11262 \Hy@activeanchortrue
11263 }
11264 \def\hyper@anchorend{%
11265 \Hy@activeanchorfalse
11266 \Hy@RestoreLastskip
11267 }
11268 \def\@urltype{url}
11269 \def\Hy@undefinedname{UNDEFINED}
11270 \def\hyper@linkstart#1#2{%
11271 \Hy@VerboseLinkStart{#1}{#2}%
11272 \Hy@pstringdef\Hy@pstringURI{#2}%
11273 \expandafter\Hy@colorlink\csname @#1color\endcsname
11274 \ltx@ifundefined{@#1bordercolor}{%
11275 \let\CurrentBorderColor\relax
11276 }{%
11277 \edef\CurrentBorderColor{%
11278 \csname @#1bordercolor\endcsname
11279 }%
11280 }%
11281 \def\Hy@tempa{#1}%
11282 \ifx\Hy@tempa\@urltype
11283 \special{!%
11284 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11285 \ifHy@href@ismap
11286 /IsMap true%
11287 \fi
11288 \Hy@href@nextactionraw
11289 >,%
11290 a=<%
11291 \ifHy@pdfa /F 4\fi
11292 \Hy@setpdfborder
11293 \ifx\CurrentBorderColor\relax
11294 \else
11295 /C [\CurrentBorderColor]%
11296 \fi
11297 >%
11298 }%
11299 \else
11300 \protected@edef\Hy@testname{#2}%
11301 \ifx\Hy@testname\@empty
11302 \Hy@Warning{%
11303 Empty destination name,\MessageBreak
11304 using '\Hy@undefinedname'%

```

```

11305 }%
11306 \let\Hy@testname\Hy@undefinedname
11307 \fi
11308 \special{!%
11309   aref \expandafter\HyperDestNameFilter
11310     \expandafter{\Hy@testname};%
11311   a=<%
11312     \ifHy@pdfa /F 4\fi
11313     \Hy@setpdfborder
11314     \ifx\CurrentBorderColor\relax
11315     \else
11316     /C [\CurrentBorderColor]%
11317     \fi
11318   >%
11319 }%
11320 \fi
11321 }
11322 \def\hyper@linkend{%
11323   \special{!endaref}%
11324   \Hy@endcolorlink
11325 }
11326 \def\hyper@linkfile#1#2#3{%
11327   \leavevmode
11328   \def\Hy@pstringF{#2}%
11329   \Hy@CleanupFile\Hy@pstringF
11330   \special{!%
11331     aref <%
11332       \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11333       f=\Hy@pstringF>#3;%
11334     a=<%
11335       \ifHy@pdfa /F 4\fi
11336       \Hy@setpdfborder
11337       \ifx\@filebordercolor\relax
11338       \else
11339       /C [\@filebordercolor]%
11340       \fi
11341     >%
11342   }%
11343   \Hy@colorlink\@filecolor
11344   #1\Hy@xspace@end
11345   \Hy@endcolorlink
11346   \special{!endaref}%
11347 }
11348 \def\hyper@linkurl#1#2{%
11349   \begingroup
11350   \Hy@pstringdef\Hy@pstringURI{#2}%
11351   \hyper@chars
11352   \leavevmode
11353   \special{!%
11354     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11355       \ifHy@href@ismap
11356       /IsMap true%
11357       \fi
11358       \Hy@href@nextactionraw
11359     >;%
11360     a=<%
11361       \ifHy@pdfa /F 4\fi

```

```

11362 \Hy@setpdfborder
11363 \ifx\@urlbordercolor\relax
11364 \else
11365 /C [\@urlbordercolor]%
11366 \fi
11367 >%
11368 }%
11369 \Hy@colorlink\@urlcolor
11370 #1\Hy@xspace@end
11371 \Hy@endcolorlink
11372 \special{!endaref}%
11373 \endgroup
11374 }
11375 \def\hyper@link#1#2#3{%
11376 \Hy@VerboseLinkStart{#1}{#2}%
11377 \ltx@ifundefined{#@#1bordercolor}{%
11378 \let\CurrentBorderColor\relax
11379 }{%
11380 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11381 }%
11382 \leavevmode
11383 \protected@edef\Hy@testname{#2}%
11384 \ifx\Hy@testname\@empty
11385 \Hy@Warning{%
11386 Empty destination name,\MessageBreak
11387 using '\Hy@undefinedname'%
11388 }%
11389 \let\Hy@testname\Hy@undefinedname
11390 \fi
11391 \special{!%
11392 aref \expandafter\HyperDestNameFilter
11393 \expandafter{\Hy@testname};%
11394 a=<%
11395 \ifHy@pdfa /F 4\fi
11396 \Hy@setpdfborder
11397 \ifx\CurrentBorderColor\relax
11398 \else
11399 /C [\CurrentBorderColor]%
11400 \fi
11401 >%
11402 }%
11403 \expandafter
11404 \Hy@colorlink\csname @#1color\endcsname
11405 #3\Hy@xspace@end
11406 \Hy@endcolorlink
11407 \special{!endaref}%
11408 }
11409 \def\hyper@image#1#2{%
11410 \hyper@linkurl{#2}{#1}%
11411 }
11412 \def\@hyper@launch run:#1\#2#3{%
11413 \Hy@pstringdef\Hy@pstringF{#1}%
11414 \Hy@pstringdef\Hy@pstringP{#3}%
11415 \leavevmode
11416 \special{!aref %
11417 <u=%
11418 /Type/Action%

```

```

11419 /S/Launch%
11420 /F(\Hy@pstringF)%
11421 \Hy@SetNewWindow
11422 \ifx\|#3\%
11423 \else
11424 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11425 \fi
11426 \Hy@href@nextactionraw
11427 >,%
11428 a=<%
11429 \ifHy@pdfa /F 4\fi
11430 \Hy@setpdfborder
11431 \ifx\@runbordercolor\relax
11432 \else
11433 /C[\@runbordercolor]%
11434 \fi
11435 >%
11436 }%
11437 \Hy@colorlink\@runcolor
11438 #2\Hy@xspace@end
11439 \Hy@endcolorlink
11440 \special{!endaref}%
11441 }
11442 \def\Acrobatmenu#1#2{%
11443 \EdefEscapeName\Hy@temp@menu{#1}%
11444 \Hy@Acrobatmenu{#1}{#2}{%
11445 \special{!%
11446 aref <u=/S /Named /N /\Hy@temp@menu>;%
11447 a=<%
11448 \ifHy@pdfa /F 4\fi
11449 \Hy@setpdfborder
11450 \ifx\@menubordercolor\relax
11451 \else
11452 /C[\@menubordercolor]%
11453 \fi
11454 >%
11455 }%
11456 \Hy@colorlink\@menucolor
11457 #2\Hy@xspace@end
11458 \Hy@endcolorlink
11459 \special{!endaref}%
11460 }%
11461 }

```

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

The code below makes sense for \TeX 7.02 or later.

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

```

11462 \ifnum\Hy@VTeXversion<702 %
11463 \else
11464 \def\hyper@pagetransition{%
11465 \ifx\@pdfpagetransition\relax
11466 \else
11467 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

11468 \else
11469 \hvtex@parse@trans\@pdfpagetransition

```

```

11470 \fi
11471 \fi
11472 }%

```

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

Syntax of VTeX \special{!trans <transition_effect>}:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

11473 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11474 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11475 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11476 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11477 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11478 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11479 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11480 \def\hvtex@param@dimension{/Dm}%
11481 \def\hvtex@param@direction{/Di}%
11482 \def\hvtex@param@duration{/D}%
11483 \def\hvtex@param@motion{/M}%

```

Tokenizer:

```

11484 \def\hvtex@gettoken{%
11485 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11486 }%

```

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

```

11487 \def\hvtex@gettoken@#1 #2\@nil{%
11488 \edef\hvtex@token{#1}%
11489 \edef\hvtex@buffer{#2}%
11490 }%
11491 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11492 \let\hvtex@trans@code\@empty
11493 \let\hvtex@param@dimension\@empty
11494 \let\hvtex@param@direction\@empty
11495 \let\hvtex@param@duration\@empty
11496 \let\hvtex@param@motion\@empty
11497 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```
11498 \hvtex@gettoken
11499 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11500 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11501 \else
11502 \hvtex@gettoken
11503 \fi
11504 \fi
11505 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11506 \hvtex@trans@params
11507 }%
```

Reentrant macro to parse optional parameters.

```
11508 \def\hvtex@trans@params{%
11509 \ifx\hvtex@buffer\@empty
11510 \else
11511 \hvtex@gettoken
11512 \let\hvtex@trans@par\hvtex@token
11513 \ifx\hvtex@buffer\@empty
11514 \else
11515 \hvtex@gettoken
11516 \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
11517 \let\hvtex@param@duration\hvtex@token
11518 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11519 \expandafter\edef\expandafter\hvtex@param@motion
11520 \expandafter{\expandafter\@gobble\hvtex@token}%
11521 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11522 \expandafter\edef\expandafter\hvtex@param@dimension
11523 \expandafter{\expandafter\@gobble\hvtex@token}%
11524 \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).

```
11525 \let\hvtex@param@direction\hvtex@token
11526 \fi\fi\fi\fi
11527 \fi
11528 \fi
11529 \ifx\hvtex@buffer\@empty
11530 \let\next\hvtex@produce@trans
11531 \else
11532 \let\next\hvtex@trans@params
11533 \fi
11534 \next
11535 }%
```

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

```
11536 \def\hvtex@produce@trans{%
```

```

11537 \let\vtex@trans@special\@empty
11538 \if S\hvtex@trans@code
11539 \edef\vtex@trans@special{\hvtex@trans@code
11540 \hvtex@param@dimension\hvtex@param@motion}%
11541 \else\if B\hvtex@trans@code
11542 \edef\vtex@trans@special{%
11543 \hvtex@trans@code\hvtex@param@dimension
11544 }%
11545 \else\if X\hvtex@trans@code
11546 \edef\vtex@trans@special{%
11547 \hvtex@trans@code\hvtex@param@motion
11548 }%
11549 \else\if W\hvtex@trans@code
11550 \edef\vtex@trans@special{%
11551 \hvtex@trans@code\hvtex@param@direction
11552 }%
11553 \else\if D\hvtex@trans@code
11554 \let\vtex@trans@special\hvtex@trans@code
11555 \else\if R\hvtex@trans@code
11556 \let\vtex@trans@special\hvtex@trans@code
11557 \else\if G\hvtex@trans@code
11558 \edef\vtex@trans@special{%
11559 \hvtex@trans@code\hvtex@param@direction
11560 }%
11561 \fi\fi\fi\fi\fi\fi
11562 \ifx\vtex@trans@special\@empty
11563 \else
11564 \ifx\hvtex@param@duration\@empty
11565 \else
11566 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11567 \multiply\dimen@\@m
11568 \edef\vtex@trans@special{%
11569 \vtex@trans@special,\strip@pt\dimen@
11570 }%
11571 \fi

```

And all the mess is just for this.

```

11572 \special{!trans \vtex@trans@special}%
11573 \fi
11574 }%
11575 \def\hyper@pageduration{%
11576 \ifx\@pdfpageduration\relax
11577 \else
11578 \ifx\@pdfpageduration\@empty
11579 \special{!duration-}%
11580 \else
11581 \special{!duration \@pdfpageduration}%
11582 \fi
11583 \fi
11584 }%
11585 \def\hyper@pagehidden{%
11586 \ifHy@useHidKey
11587 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11588 \fi
11589 }%
11590 \g@addto@macro\Hy@EveryPageBoxHook{%

```

```

11591 \hyper@pagetransition
11592 \hyper@pageduration
11593 \hyper@pagehidden
11594 }%
11595 \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

```

11596 \ifx\@pdfproducer\relax
11597 \def\@pdfproducer{VTeX}%
11598 \ifnum\Hy@VTeXversion>\z@
11599 \count@\VTeXversion
11600 \divide\count@ 100 %
11601 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11602 \multiply\count@ -100 %
11603 \advance\count@\VTeXversion
11604 \edef\@pdfproducer{%
11605 \@pdfproducer
11606 .\ifnum\count@<10 0\fi\the\count@
11607 \ifx\VTeXOS\@undefined\else
11608 \ifnum\VTeXOS>0 %
11609 \ifnum\VTeXOS<6 %
11610 \space(
11611 \ifcase\VTeXOS
11612 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11613 \fi
11614 )%
11615 \fi
11616 \fi
11617 \fi
11618 ,\space
11619 \ifnum\OpMode=\@ne PDF\else PS\fi
11620 \space backend%
11621 \ifx\gexmode\@undefined\else
11622 \ifnum\gexmode>\z@\space with GeX\fi
11623 \fi
11624 }%
11625 \fi
11626 \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).

```

11627 \def\PDF@SetupDoc{%
11628   \ifx\@pdfpagescrop\@empty
11629   \else
11630     \special{!pdfinfo b=<\@pdfpagescrop>}%
11631   \fi
11632   \ifx\@pdfstartpage\@empty
11633   \else
11634     \ifx\@pdfstartview\@empty
11635     \else
11636       \special{!onopen Page\@pdfstartpage}%
11637     \fi
11638   \fi
11639   \special{!pdfinfo p=</\@pdfpagemode>}%
11640   \ifx\@baseurl\@empty
11641   \else
11642     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11643   \fi
11644   \special{!pdfinfo v=<<<%
11645     \ifHy@pdftoolbar\else /HideToolbar true\fi
11646     \ifHy@pdfmenubar\else /HideMenubar true\fi
11647     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11648     \ifHy@pdffitwindow /FitWindow true\fi
11649     \ifHy@pdfcenterwindow /CenterWindow true\fi
11650     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11651     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11652     \Hy@UseNameKey{Direction}\@pdfdirection
11653     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11654     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11655     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11656     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11657     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11658     \Hy@UseNameKey{Duplex}\@pdfduplex
11659     \ifx\@pdfpicktraybypdfsize\@empty
11660     \else
11661       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11662     \fi
11663     \ifx\@pdfprintpagerange\@empty
11664     \else
11665       /PrintPageRange[\@pdfprintpagerange]%
11666     \fi
11667     \ifx\@pdfnumcopies\@empty
11668     \else
11669       /NumCopies \@pdfnumcopies

```

```

11670 \fi
11671 >>>}%
11672 \ifx\@pdfpagelayout\@empty
11673 \else
11674 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11675 \fi
11676 }%
11677 \HyInfo@AddonUnsupportedtrue
11678 \define@key{Hyp}{pdfcreationdate}{%
11679 \Hy@Warning{%
11680 VTeX does not support pdfcreationdate.\MessageBreak
11681 Therefore its setting is ignored%
11682 }%
11683 }
11684 \define@key{Hyp}{pdfmoddate}{%
11685 \Hy@Warning{%
11686 VTeX does not support pdfmoddate.\MessageBreak
11687 Therefore its setting is ignored%
11688 }%
11689 }
11690 \def\PDF@FinishDoc{%
11691 \Hy@UseMaketitleInfos
11692 \HyInfo@TrappedUnsupported
11693 \special{!pdfinfo a=<\@pdfauthor>}%
11694 \special{!pdfinfo t=<\@pdftitle>}%
11695 \special{!pdfinfo s=<\@pdfsubject>}%
11696 \special{!pdfinfo c=<\@pdfcreator>}%
11697 \ifx\@pdfproducer\relax
11698 \else
11699 \special{!pdfinfo r=<\@pdfproducer>}%
11700 \fi
11701 \special{!pdfinfo k=<\@pdfkeywords>}%
11702 \Hy@DisableOption{pdfauthor}%
11703 \Hy@DisableOption{pdftitle}%
11704 \Hy@DisableOption{pdfsubject}%
11705 \Hy@DisableOption{pdfcreator}%
11706 \Hy@DisableOption{pdfcreationdate}%
11707 \Hy@DisableOption{pdfmoddate}%
11708 \Hy@DisableOption{pdfproducer}%
11709 \Hy@DisableOption{pdfkeywords}%
11710 \Hy@DisableOption{pdftrapped}%
11711 \Hy@DisableOption{pdfinfo}%
11712 }
11713 </vtex>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11714 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11715 <package>\providecommand*{\Hy@DistillerDestFix}{%
11716 <*pdfmark | dviwindo>
11717 \def\Hy@DistillerDestFix{%
11718 \begingroup
11719 \let\x\literalps@out

```

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

```

11720 \ifnum \@ifundefined{OpMode}{0}{%
11721 \ifundefined{gexmode}{0}{%
11722 \ifnum\gexmode>0 \OpMode\else 0\fi
11723 }>1 %
11724 \def\x##1{%
11725 \immediate\special{!=##1}%
11726 }%
11727 \fi
11728 \x{%
11729 /product where{%
11730 pop %
11731 product(Distiller)search{%
11732 pop pop pop %
11733 version(.)search{%
11734 exch pop exch pop%
11735 (3011)eq{%
11736 gsave %
11737 newpath 0 0 moveto closepath clip%
11738 /Courier findfont 10 scalefont setfont %
11739 72 72 moveto(.)show %
11740 grestore%
11741 }if%
11742 }{pop}ifelse%
11743 }{pop}ifelse%
11744 }if%
11745 }%
11746 \endgroup
11747 }
11748 </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

```

```

11749 <*pdfmark>
11750 \Hy@breaklinks@unsupported
11751 \def\HyPat@ObjRef{%

```

```

11752 \[{}+}%
11753 }
11754 \Hy@WrapperDef\hyper@anchor#1{%
11755 \Hy@SaveLastskip
11756 \Hy@VerboseAnchor{#1}%
11757 \begingroup
11758 \pdfmark[\anchor@spot]{%
11759 pdfmark=/DEST,%
11760 linktype=anchor,%
11761 View=/\@pdfview \@pdfviewparams,%
11762 DestAnchor={#1}%
11763 }%
11764 \endgroup
11765 \Hy@RestoreLastskip
11766 }
11767 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11768 \Hy@WrapperDef\hyper@anchorstart#1{%
11769 \Hy@SaveLastskip
11770 \Hy@VerboseAnchor{#1}%
11771 \literalps@out{H.S}%
11772 \Hy@AllowHyphens
11773 \xdef\hyper@currentanchor{#1}%
11774 \Hy@activeanchortrue
11775 }
11776 \def\hyper@anchorend{%
11777 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11778 \pdfmark{%
11779 pdfmark=/DEST,%
11780 linktype=anchor,%
11781 View=/\@pdfview \@pdfviewparams,%
11782 DestAnchor=\hyper@currentanchor,%
11783 }%
11784 \Hy@activeanchorfalse
11785 \Hy@RestoreLastskip
11786 }
11787 \def\hyper@linkstart#1#2{%
11788 \Hy@VerboseLinkStart{#1}{#2}%
11789 \ifHy@breaklinks
11790 \else
11791 \leavevmode
11792 \ifmmode
11793 \def\Hy@LinkMath{$}%
11794 \else
11795 \let\Hy@LinkMath\ltx@empty
11796 \fi
11797 \Hy@SaveSpaceFactor
11798 \hbox\bgroup
11799 \Hy@RestoreSpaceFactor
11800 \Hy@LinkMath
11801 \fi
11802 \expandafter\Hy@colorlink\csname @#1color\endcsname
11803 \literalps@out{H.S}%
11804 \Hy@AllowHyphens
11805 \xdef\hyper@currentanchor{#2}%
11806 \gdef\hyper@currentlinktype{#1}%
11807 }
11808 \def\hyper@linkend{%

```

```

11809 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L.}%
11810 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11811   \let\Hy@tempcolor\relax
11812 }{%
11813   \edef\Hy@tempcolor{%
11814     \csname @\hyper@currentlinktype bordercolor\endcsname
11815   }%
11816 }%
11817 \pdfmark{%
11818   pdfmark=/ANN,%
11819   linktype=link,%
11820   Subtype=/Link,%
11821   PDFAFlags=4,%
11822   Dest=\hyper@currentanchor,%
11823   AcroHighlight=\@pdfhighlight,%
11824   Border=\@pdfborder,%
11825   BorderStyle=\@pdfborderstyle,%
11826   Color=\Hy@tempcolor,%
11827   Raw=H.B%
11828 }%
11829 \Hy@endcolorlink
11830 \ifHy@breaklinks
11831 \else
11832   \Hy@LinkMath
11833   \Hy@SaveSpaceFactor
11834   \egroup
11835   \Hy@RestoreSpaceFactor
11836 \fi
11837 }

```

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.

```

11838 \begingroup
11839 \catcode'P=12 %
11840 \catcode'T=12 %
11841 \lowercase{\endgroup
11842 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11843 }
11844 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11845 \def\hyper@pagetransition{%
11846   \ifx\@pdfpagetransition\relax
11847   \else
11848     \ifx\@pdfpagetransition\@empty
11849       % 1. Does an old entry have to be deleted?
11850       % 2. If 1=yes, how to delete?
11851     \else
11852       \pdfmark{%
11853         pdfmark=/PUT,%
11854         Raw={%
11855           \string{ThisPage\string}%
11856           <</Trans << /S /\@pdfpagetransition\space >> >>%
11857         }%
11858       }%
11859     \fi

```

```

11860 \fi
11861 }

```

\hyper@pageduration

```

11862 \def\hyper@pageduration{%
11863 \ifx\@pdfpageduration\relax
11864 \else
11865 \ifx\@pdfpageduration\@empty
11866 % 1. Does an old entry have to be deleted?
11867 % 2. If 1=yes, how to delete?
11868 \else
11869 \pdfmark{%
11870 pdfmark=/PUT,%
11871 Raw={%
11872 \string{ThisPage\string}%
11873 <</Dur \@pdfpageduration>>%
11874 }%
11875 }%
11876 \fi
11877 \fi
11878 }

```

\hyper@pagehidden

```

11879 \def\hyper@pagehidden{%
11880 \ifHy@useHidKey
11881 \pdfmark{%
11882 pdfmark=/PUT,%
11883 Raw={%
11884 \string{ThisPage\string}%
11885 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11886 }%
11887 }%
11888 \fi
11889 }

```

```

11890 \g@addto@macro\Hy@EveryPageBoxHook{%
11891 \hyper@pagetransition
11892 \hyper@pageduration
11893 \hyper@pagehidden
11894 }

11895 \def\hyper@image#1#2{%
11896 \hyper@linkurl{#2}{#1}%
11897 }

11898 \def\Hy@undefinedname{UNDEFINED}
11899 \def\hyper@link#1#2#3{%
11900 \Hy@VerboseLinkStart{#1}{#2}%
11901 \ltx@ifundefined{@#1bordercolor}{%
11902 \let\Hy@tempcolor\relax
11903 }{%
11904 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11905 }%
11906 \begingroup
11907 \protected@edef\Hy@testname{#2}%
11908 \ifx\Hy@testname\@empty
11909 \Hy@Warning{%
11910 Empty destination name,\MessageBreak
11911 using '\Hy@undefinedname'%

```

```

11912 }%
11913 \let\Hy@testname\Hy@undefinedname
11914 \fi
11915 \pdfmark[#{3}]{%
11916   Color=\Hy@tempcolor,%
11917   linktype={#1},%
11918   AcroHighlight=\@pdfhighlight,%
11919   Border=\@pdfborder,%
11920   BorderStyle=\@pdfborderstyle,%
11921   pdfmark=/ANN,%
11922   Subtype=/Link,%
11923   PDFAFlags=4,%
11924   Dest=\Hy@testname
11925 }%
11926 \endgroup
11927 }
11928 \newtoks\pdf@docset
11929 \def\PDF@FinishDoc{%
11930   \Hy@UseMaketitleInfos
11931   \HyInfo@GenerateAddons
11932   \let\Hy@temp\@empty
11933   \ifx\@pdfcreationdate\@empty
11934   \else
11935     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11936   \fi
11937   \ifx\@pdfmoddate\@empty
11938   \else
11939     \expandafter\def\expandafter\Hy@temp\expandafter{%
11940       \Hy@temp
11941       ModDate=\@pdfmoddate,%
11942     }%
11943   \fi
11944   \ifx\@pdfproducer\relax
11945   \else
11946     \expandafter\def\expandafter\Hy@temp\expandafter{%
11947       \Hy@temp
11948       Producer=\@pdfproducer,%
11949     }%
11950   \fi
11951   \expandafter
11952   \pdfmark\expandafter{%
11953     \Hy@temp
11954     pdfmark=/DOCINFO,%
11955     Title=\@pdftitle,%
11956     Subject=\@pdfsubject,%
11957     Creator=\@pdfcreator,%
11958     Author=\@pdfauthor,%
11959     Keywords=\@pdfkeywords,%
11960     Trapped=\@pdftrapped
11961   }%
11962   \ifx\HyInfo@Addons\@empty
11963   \else
11964     \pdfmark{%
11965       pdfmark=/DOCINFO,%
11966       Raw={\HyInfo@Addons}%
11967     }%
11968   \fi

```

```

11969 \Hy@DisableOption{pdfauthor}%
11970 \Hy@DisableOption{pdftitle}%
11971 \Hy@DisableOption{pdfsubject}%
11972 \Hy@DisableOption{pdfcreator}%
11973 \Hy@DisableOption{pdfcreationdate}%
11974 \Hy@DisableOption{pdfmoddate}%
11975 \Hy@DisableOption{pdfproducer}%
11976 \Hy@DisableOption{pdfkeywords}%
11977 \Hy@DisableOption{pdftrapped}%
11978 \Hy@DisableOption{pdfinfo}%
11979 }
11980 \def\PDF@SetupDoc{%
11981 \def\Hy@temp{}%
11982 \ifx\@pdfstartpage\@empty
11983 \else
11984 \ifx\@pdfstartview\@empty
11985 \else
11986 \edef\Hy@temp{%
11987 ,Page=\@pdfstartpage
11988 ,View=\@pdfstartview
11989 }%
11990 \fi
11991 \fi
11992 \edef\Hy@temp{%
11993 \noexpand\pdfmark{%
11994 pdfmark=/DOCVIEW,%
11995 PageMode=/\@pdfpagemode
11996 \Hy@temp
11997 }%
11998 }%
11999 \Hy@temp
12000 \ifx\@pdfpagescrop\@empty
12001 \else
12002 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12003 \fi
12004 \edef\Hy@temp{%
12005 \ifHy@pdftoolbar\else /HideToolbar true\fi
12006 \ifHy@pdfmenubar\else /HideMenubar true\fi
12007 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12008 \ifHy@pdffitwindow /FitWindow true\fi
12009 \ifHy@pdfcenterwindow /CenterWindow true\fi
12010 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12011 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12012 \Hy@UseNameKey{Direction}\@pdfdirection
12013 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12014 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12015 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12016 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12017 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12018 \Hy@UseNameKey{Duplex}\@pdfduplex
12019 \ifx\@pdfpicktraybypdfsize\@empty
12020 \else
12021 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12022 \fi
12023 \ifx\@pdfprintpagerange\@empty
12024 \else
12025 /PrintPageRange[\@pdfprintpagerange]%

```

```

12026 \fi
12027 \ifx\@pdfnumcopies\@empty
12028 \else
12029 /NumCopies \@pdfnumcopies
12030 \fi
12031 }%
12032 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12033 \pdfmark{%
12034 pdfmark=/PUT,%
12035 Raw={%
12036 \string{Catalog\string}<<%
12037 \ifx\Hy@temp\@empty
12038 \else
12039 /ViewerPreferences<<\Hy@temp>>%
12040 \fi
12041 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12042 \ifx\@pdflang\relax
12043 \else
12044 /Lang(\@pdflang)%
12045 \fi
12046 \ifx\@baseurl\@empty
12047 \else
12048 /URI<</Base(\Hy@pstringB)>>%
12049 \fi
12050 >>%
12051 }%
12052 }%
12053 }
12054 \pdfmark
12055 \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.

```

12056 \newif\ifHy@pdfmarkerror
12057 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
12058 \def\pdfmark@[#1]#2{%
12059 \Hy@pdfmarkerrorfalse
12060 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12061 \@processme
12062 \let\pdf@type\relax
12063 \let\pdf@objdef\ltx@empty
12064 \kvsetkeys{PDF}{#2}%
12065 \ifHy@pdfmarkerror
12066 \else
12067 \ifx\pdf@type\relax
12068 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12069 \ifx\#1\%
12070 \else
12071 \pdf@rect{#1}%
12072 \fi
12073 \else
12074 \ifx\#1\%
12075 \literalps@out{%

```

```

12076 [%
12077 \ifx\pdf@objdef\ltx@empty
12078 \else
12079 \_objdef\string{\pdf@objdef\string}%
12080 \fi
12081 \the\pdf@toks\space\pdf@type\space pdfmark%
12082 }%
12083 \else
12084 \ltx@ifundefined{@\pdf@linktype color}{%
12085 \Hy@colorlink\@linkcolor
12086 }{%
12087 \expandafter\Hy@colorlink
12088 \csname @\pdf@linktype color\endcsname
12089 }%
12090 \pdf@rect{#1}%
12091 \literalps@out{%
12092 [%
12093 \ifx\pdf@objdef\ltx@empty
12094 \else
12095 \_objdef\string{\pdf@objdef\string}%
12096 \fi
12097 \the\pdf@toks\space\pdf@type\space pdfmark%
12098 }%
12099 \Hy@endcolorlink
12100 \fi
12101 \fi
12102 \fi
12103 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX 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}

```

```

12104 \newsavebox{\pdf@box}
12105 \providecommand*{\Hy@setouterhbox}{\sbox}
12106 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12107 \def\Hy@DEST{/DEST}
12108 \def\pdf@rect#1{%
12109 \begingroup
12110 \chardef\x=1 %
12111 \def\Hy@temp{#1}%
12112 \ifx\Hy@temp\ltx@empty
12113 \chardef\x=0 %
12114 \else
12115 \def\y{\anchor@spot}%
12116 \ifx\Hy@temp\y
12117 \def\y{\relax}%
12118 \ifx\anchor@spot\y
12119 \chardef\x=0 %

```

```

12120     \fi
12121     \fi
12122     \fi
12123 \expandafter\endgroup
12124 \ifcase\x
12125   \literalps@out{H.S}%
12126   \literalps@out{H.R}%
12127 \else
12128   \leavevmode
12129   \Hy@SaveSpaceFactor
12130   \ifmmode
12131     \def\Hy@LinkMath{$}%
12132   \else
12133     \let\Hy@LinkMath\ltx@empty
12134   \fi
12135   \ifHy@breaklinks
12136     \Hy@setouterhbox\pdf@box{%
12137       \Hy@RestoreSpaceFactor
12138       \Hy@LinkMath
12139       \Hy@AllowHyphens#1\Hy@xspace@end
12140       \Hy@LinkMath
12141       \Hy@SaveSpaceFactor
12142     }%
12143   \else
12144     \sbox\pdf@box{%
12145       \Hy@RestoreSpaceFactor
12146       \Hy@LinkMath
12147       #1\Hy@xspace@end
12148       \Hy@LinkMath
12149       \Hy@SaveSpaceFactor
12150     }%
12151   \fi
12152   \dimen@ \ht\pdf@box
12153   \ifdim\dp\pdf@box=\z@
12154     \literalps@out{H.S}%
12155   \else
12156     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12157   \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...).

```

12158   \ifHy@breaklinks
12159     \ifhmode
12160       \Hy@breaklinksunhbox\pdf@box
12161     \else
12162       \box\pdf@box
12163     \fi
12164   \else
12165     \expandafter\box\pdf@box
12166   \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

12167   \ifdim\dimen@=\z@
12168     \literalps@out{H.R}%

```

```

12169 \else
12170 \raise\dimen@\hbox{\literalps@out{H.R}}%
12171 \fi
12172 \Hy@RestoreSpaceFactor
12173 \fi
12174 \ifx\pdf@type\Hy@DEST
12175 \else
12176 \pdf@addtoksx{H.B}%
12177 \fi
12178 }

```

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.

```

12179 \newtoks\pdf@toks
12180 \newtoks\pdf@defaulttoks
12181 \pdf@defaulttoks={}%
12182 \def\pdf@addtoks#1#2{%
12183 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12184 \@processme
12185 }
12186 \def\pdf@addtoksx#1{%
12187 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12188 \@processme
12189 }
12190 \def\PDFdefaults#1{%
12191 \pdf@defaulttoks={#1}%
12192 }

```

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

```

12193 % what is the type of pdfmark?
12194 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12195 % what is the link type?
12196 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12197 \def\pdf@linktype{link}
12198 % named object?
12199 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12200 \let\pdf@objdef\ltx@empty
12201 % parameter is a stream of PDF
12202 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12203 % parameter is a name
12204 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12205 % parameter is a array
12206 \define@key{PDF}{Border}{%
12207 \edef\Hy@temp{#1}%
12208 \ifx\Hy@temp\@empty
12209 \else
12210 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12211 \fi
12212 }
12213 \let\Hy@BorderArrayPatch\@empty
12214 % parameter is a dictionary
12215 \define@key{PDF}{BorderStyle}{%
12216 \edef\Hy@temp{#1}%
12217 \ifx\Hy@temp\@empty
12218 \else
12219 \pdf@addtoks{<<#1>>}{BS}%
12220 \fi

```

```

12221 }
12222 % parameter is a array
12223 \define@key{PDF}{Color}{%
12224   \ifx\relax#1\relax
12225   \else
12226     \pdf@addtoks{[#1]}{Color}% hash-ok
12227   \fi
12228 }
12229 % parameter is a string
12230 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12231 % parameter is a integer
12232 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12233 % parameter is a array
12234 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12235 % parameter is a string
12236 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12237 % parameter is a string or file
12238 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12239 % parameter is a destination
12240 \define@key{PDF}{Dest}{%
12241   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12242   \ifx\Hy@pstringDest\@empty
12243     \Hy@pdfmarkerrortrue
12244     \Hy@Warning{Destination with empty name ignored}%
12245   \else
12246     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12247   \fi
12248 }
12249 \define@key{PDF}{DestAnchor}{%
12250   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12251   \ifx\Hy@pstringDest\@empty
12252     \Hy@pdfmarkerrortrue
12253     \Hy@Warning{Destination with empty name ignored}%
12254   \else
12255     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12256   \fi
12257 }
12258 % parameter is a string
12259 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12260 % parameter is a string
12261 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12262 % parameter is a int
12263 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12264 \define@key{PDF}{PDFAFlags}{%
12265   \ifHy@pdfa
12266     \pdf@addtoks{#1}{F}%
12267   \fi
12268 }
12269 % parameter is a name
12270 \define@key{PDF}{AcroHighlight}{%
12271   \begingroup
12272     \edef\x{#1}%
12273     \expandafter\endgroup\ifx\x\@empty
12274     \else
12275       \pdf@addtoks{#1}{H}%
12276     \fi
12277 }

```

```

12278 % parameter is a string
12279 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12280 % parameter is a string
12281 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12282 % parameter is a string
12283 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12284 % parameter is a string
12285 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12286 % parameter is a Boolean
12287 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12288 % parameter is a integer or name
12289 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12290 % parameter is a name
12291 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12292 % parameter is a string
12293 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12294 % parameter is a array
12295 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12296 % parameter is a integer
12297 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12298 % parameter is a name
12299 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12300 % parameter is a string
12301 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12302 % parameter is a string
12303 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12304 % parameter is a string
12305 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
12306 % parameter is an array
12307 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12308 % parameter is a string
12309 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12310 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12311 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12312 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12313 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12314 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12315 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
12316 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12317 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12318 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12319 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12320 \define@key{PDF}{Trapped}{%
12321   \edef\Hy@temp{#1}%
12322   \ifx\Hy@temp\@empty
12323     \else
12324       \pdf@addtoks{/#1}{Trapped}%
12325     \fi
12326 }
12327
12328 </pdfmarkbase>
12329 <*pdfmark>
12330 \def\Acrobatmenu#1#2{%
12331   \EdefEscapeName\Hy@temp@menu{#1}%
12332   \Hy@Acrobatmenu{#1}{#2}{%
12333     \pdfmark{#2}{%

```

```

12334     linktype=menu,%
12335     pdfmark=/ANN,%
12336     AcroHighlight=\@pdfhighlight,%
12337     Border=\@pdfborder,%
12338     BorderStyle=\@pdfborderstyle,%
12339     Color=\@menubordercolor,%
12340     Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12341     Subtype=/Link,%
12342     PDFAFlags=4%
12343 }%
12344 }%
12345 }

```

And now for some useful examples:

```

12346 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12347 \def\PDFNextPage@[#1]#2{%
12348   \pdfmark[#{#2}]{%
12349     #1,%
12350     Border=\@pdfborder,%
12351     BorderStyle=\@pdfborderstyle,%
12352     Color=.2 .1 .5,%
12353     pdfmark=/ANN,%
12354     Subtype=/Link,%
12355     PDFAFlags=4,%
12356     Page=/Next%
12357   }%
12358 }
12359 \def\PDFPreviousPage{%
12360   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12361 }
12362 \def\PDFPreviousPage@[#1]#2{%
12363   \pdfmark[#{#2}]{%
12364     #1,%
12365     Border=\@pdfborder,%
12366     BorderStyle=\@pdfborderstyle,%
12367     Color=.4 .4 .1,%
12368     pdfmark=/ANN,%
12369     Subtype=/Link,%
12370     PDFAFlags=4,%
12371     Page=/Prev%
12372   }%
12373 }
12374 \def\PDFOpen#1{%
12375   \pdfmark{#1,pdfmark=/DOCVIEW}%
12376 }

```

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

```

12377 \def\hyper@linkurl#1#2{%
12378   \begingroup
12379   \Hy@pstringdef\Hy@pstringURI{#2}%
12380   \hyper@chars
12381   \leavevmode
12382   \pdfmark[#{#1}]{%
12383     pdfmark=/ANN,%
12384     linktype=url,%
12385     AcroHighlight=\@pdfhighlight,%
12386     Border=\@pdfborder,%
12387     BorderStyle=\@pdfborderstyle,%

```

```

12388     Color=\@urlbordercolor,%
12389     Action={<<%
12390       /Subtype/URI%
12391       /URI(\Hy@pstringURI)%
12392       \ifHy@href@ismap
12393       /IsMap true%
12394       \fi
12395     >>},%
12396     Subtype=/Link,%
12397     PDFAFlags=4%
12398   }%
12399 \endgroup
12400 }
12401 \def\hyper@linkfile#1#2#3{%
12402   \begingroup
12403     \def\Hy@pstringF{#2}%
12404     \Hy@CleanupFile\Hy@pstringF
12405     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12406     \Hy@pstringdef\Hy@pstringD{#3}%
12407     \Hy@MakeRemoteAction
12408     \leavevmode
12409     \pdfmark[{#1}]{%
12410       pdfmark=/ANN,%
12411       Subtype=/Link,%
12412       PDFAFlags=4,%
12413       AcroHighlight=\@pdfhighlight,%
12414       Border=\@pdfborder,%
12415       BorderStyle=\@pdfborderstyle,%
12416       linktype=file,%
12417       Color=\@filebordercolor,%
12418       Action={%
12419         <<%
12420           /S/GoToR%
12421           \Hy@SetNewWindow
12422           /F(\Hy@pstringF)%
12423           /D%
12424           \ifx\\#3\\%
12425             [\Hy@href@page\@pdfremotestartview]%
12426           \else
12427             (\Hy@pstringD)cvn%
12428           \fi
12429           \Hy@href@nextactionraw
12430         >>%
12431       }%
12432     }%
12433   \endgroup
12434 }
12435 \def\@hyper@launch run:#1\\#2#3{%
12436   \begingroup
12437     \Hy@pstringdef\Hy@pstringF{#1}%
12438     \Hy@pstringdef\Hy@pstringP{#3}%
12439     \leavevmode
12440     \pdfmark[{#2}]{%
12441       pdfmark=/ANN,%
12442       Subtype=/Link,%
12443       PDFAFlags=4,%
12444       AcroHighlight=\@pdfhighlight,%

```

```

12445   Border=\@pdfborder,%
12446   BorderStyle=\@pdfborderstyle,%
12447   linktype=run,%
12448   Color=\@runbordercolor,%
12449   Action={%
12450     <<%
12451       /S/Launch%
12452       \Hy@SetNewWindow
12453       /F(\Hy@pstringF)%
12454       \ifx\#3\%
12455       \else
12456       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12457       \fi
12458       \Hy@href@nextactionraw
12459     >>%
12460   }%
12461 }%
12462 \endgroup
12463 }
12464 \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.

```

12465 (*dvips)
12466 \providecommand*\XR@ext\{pdf}
12467 \let\Hy@raisedlink\ltx@empty
12468 \def\litalps@out#1{\special{ps:SDict begin #1 end}}%
12469 \def\headerps@out#1{\special{! #1}}%
12470 \input{pdfmark.def}%
12471 \ifx\@pdfproducer\relax
12472 \def\@pdfproducer{dvips + Distiller}%
12473 \fi
12474 \providecommand*\@pdfborder{0 0 1}
12475 \providecommand*\@pdfborderstyle{}
12476 \providecommand*\@pdfview{XYZ}
12477 \providecommand*\@pdfviewparams{ H.V}
12478 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12479 \g@addto@macro\Hy@FirstPageHook{%
12480 \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.

```
12481 /DvipsToPDF{72.27 mul Resolution div} def%
12482 /PDFToDvips{72.27 div Resolution mul} def%
12483 /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.

```
12484 /BorderArrayPatch{%
12485   [exch{%
12486     dup dup type/integertype eq exch type/realtype eq or%
12487     {BPToDvips}if%
12488   }forall]%
12489 }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.

```
12490 /HyperBorder {1 PDFToDvips} def%
12491 /H.V {pdf@hoff pdf@voff null} def%
12492 /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

```
12493 /H.S {%
12494   currentpoint %
12495   HyperBorder add /pdf@lly exch def %
12496   dup DvipsToPDF 72 add /pdf@hoff exch def %
12497   HyperBorder sub /pdf@llx exch def%
12498 } 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

```
12499 /H.L {%
12500   2 sub dup%
12501   /HyperBasePt exch def %
12502   PDFToDvips /HyperBaseDvips exch def %
12503   currentpoint %
12504   HyperBaseDvips sub /pdf@ury exch def%
12505   /pdf@urx exch def%
12506 } def%
12507 /H.A {%
12508   H.L %
12509 % |pdf@voff| = the distance from the top of the page to a point
12510 % |\baselineskip| above the current point in PDF coordinates
12511   currentpoint exch pop %
12512   vsize 72 sub exch DvipsToPDF %
12513   HyperBasePt sub % baseline skip
12514   sub /pdf@voff exch def%
12515 } def%
12516 /H.R {%
12517   currentpoint %
12518   HyperBorder sub /pdf@ury exch def %
```

```

12519   HyperBorder add /pdf@urx exch def %
12520 % | /pdf@voff| = the distance from the top of the page to the current point, in
12521 % PDF coordinates
12522   currentpoint exch pop vsize 72 sub %
12523   exch DvipsToPDF sub /pdf@voff exch def%
12524 } def%
12525 }%
12526 }
12527 \AtBeginShipoutFirst{%
12528   \ifHy@setpagesize
12529     \begingroup
12530     \@ifundefined{stockwidth}{%
12531       \ifdim\paperwidth>\z@
12532         \ifdim\paperheight>\z@
12533           \special{papersize=\the\paperwidth,\the\paperheight}%
12534         \fi
12535       \fi
12536     }{%
12537       \ifdim\stockwidth>\z@
12538         \ifdim\stockheight>\z@
12539           \special{papersize=\the\stockwidth,\the\stockheight}%
12540         \fi
12541       \fi
12542     }%
12543   \endgroup
12544 \fi
12545 \Hy@DisableOption{setpagesize}%
12546 }
12547 \def\setpdfinkmargin#1{%
12548   \begingroup
12549   \setlength{\dimen@}{#1}%
12550   \literalps@out{%
12551     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12552   }%
12553   \endgroup
12554 }
12555 </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.

```

12556 (*vtexpdfmark)
12557 \providecommand*\XR@ext}{pdf}
12558 \let\Hy@raisedlink\ltx@empty
12559 \def\literalps@out#1{\special{pS:#1}}%
12560 \def\headerps@out#1{\immediate\special{pS:#1}}%
12561 \input{pdfmark.def}%
12562 \ifx\@pdfproducer\relax
12563   \ifnum\OpMode=\@ne
12564     \def\@pdfproducer{VTeX}%
12565   \else
12566     \def\@pdfproducer{VTeX + Distiller}%
12567   \fi

```

```

12568 \fi
12569 \providecommand*\@pdfborder{0 0 1}
12570 \providecommand*\@pdfborderstyle{}
12571 \providecommand*\@pdfview{XYZ}
12572 \providecommand*\@pdfviewparams{ H.V}

12573 \g@addto@macro\Hy@FirstPageHook{%
12574   \headerps@out{%
12575     /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.

```

12576   /HyperBorder {1} def%
12577   /H.V {pdf@hoff pdf@voff null} def%
12578   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12579   /H.S {%
12580     currentpoint %
12581     HyperBorder sub%
12582     /pdf@lly exch def %
12583     dup 72 add /pdf@hoff exch def %
12584     HyperBorder sub%
12585     /pdf@llx exch def%
12586   } def%

```

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

```

12587   /H.L {%
12588     2 sub%
12589     /HyperBasePt exch def %
12590     currentpoint %
12591     HyperBasePt add HyperBorder add%
12592     /pdf@ury exch def %
12593     HyperBorder add%
12594     /pdf@urx exch def%
12595   } def%
12596   /H.A {%
12597     H.L %
12598     currentpoint exch pop %
12599     vsize 72 sub exch %
12600     HyperBasePt add add%
12601     /pdf@voff exch def%
12602   } def%

```

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

```

12603   /H.R {%
12604     currentpoint %
12605     HyperBorder add%
12606     /pdf@ury exch def %
12607     HyperBorder add%
12608     /pdf@urx exch def %
12609     currentpoint exch pop vsize 72 sub add%
12610     /pdf@voff exch def%
12611   } def%
12612 }%
12613 }

```

```

12614 \def\setpdfinkmargin#1{%
12615   \begingroup
12616     \setlength{\dimen@}{#1}%
12617     \literalps@out{%
12618       /HyperBorder{\strip@pt\dimen@}def%
12619     }%
12620   \endgroup
12621 }
12622 </vtxpdfmark>

```

47.11 Textures

```

12623 <*textures>
12624 \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.

```

12625 \begingroup
12626   \obeylines %
12627   \gdef\Hy@ps@CR{\noexpand
12628     }%
12629 \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`.

```

12630 \def\literalps@out#1{%
12631   \special{postscript 0 0 transform}%
12632   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12633 }%
12634 %

```

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.

```

12635 \def\headerps@out#1{%
12636   \special{%
12637     prepostscript TeXdict begin\Hy@ps@CR
12638       #1\Hy@ps@CR
12639     end%
12640   }%
12641 }%
12642 %

```

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.

```

12643 \g@addto@macro\Hy@FirstPageHook{%
12644   \headerps@out{%
12645     /betterpdfmark {%
12646       systemdict begin %
12647         dup /BP eq%
12648         {cleartomark gsave nulldevice []%
12649          {dup /EP eq%
12650           {cleartomark cleartomark grestore}%
12651           {cleartomark}%
12652           ifelse%
12653         }ifelse %
12654       end%
12655     }def\Hy@ps@CR
12656     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12657   }% end of \headerps@out
12658 }% end of \AtBeginShipoutFirst
12659 %
12660 \input{pdfmark.def}%
12661 %
12662 \ifx\@pdfproducer\relax
12663   \def\@pdfproducer{Textures + Distiller}%
12664 \fi
12665 \providecommand*\@pdfborder{0 0 1}
12666 \providecommand*\@pdfborderstyle{}
12667 \providecommand*\@pdfview{XYZ}
12668 \providecommand*\@pdfviewparams{ H.V}
12669 %

```

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 .

```

12670 \Hy@AtBeginDocument{%
12671   \headerps@out{%

```

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

```

12672     /vsize {\Hy@pageheight} def%
12673     /DvipsToPDF {} def%
12674     /PDFToDvips {} def%
12675     /BPToDvips {} def%
12676     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12677     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12678     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12679     /H.S {%
12680       currentpoint %
12681       HyperBorder add /pdf@lly exch def %
12682       dup DvipsToPDF 72 add /pdf@hoff exch def %
12683       HyperBorder sub /pdf@llx exch def%
12684     } def\Hy@ps@CR
12685     /H.L {%
12686       2 sub %
12687       PDFToDvips /HyperBase exch def %

```

```

12688     currentpoint %
12689     HyperBase sub /pdf@ury exch def%
12690     /pdf@urx exch def%
12691   } def\Hy@ps@CR
12692   /H.A {%
12693     H.L %
12694     currentpoint exch pop %
12695     vsize 72 sub exch DvipsToPDF %
12696     HyperBase sub % baseline skip
12697     sub /pdf@voff exch def%
12698   } def\Hy@ps@CR
12699   /H.R {%
12700     currentpoint %
12701     HyperBorder sub /pdf@ury exch def %
12702     HyperBorder add /pdf@urx exch def %
12703     currentpoint exch pop vsize 72 sub %
12704     exch DvipsToPDF sub /pdf@voff exch def%
12705   } def\Hy@ps@CR
12706 }%
12707 }

12708 \def\setpdfinkmargin#1{%
12709   \begingroup
12710     \setlength{\dimen@}{#1}%
12711     \literalps@out{%
12712       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12713     }%
12714   \endgroup
12715 }

12716 \Hy@AtBeginDocument{%
12717   \ifHy@colorlinks
12718     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12719   \fi
12720 }

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.

12721 \expandafter\let\expandafter\keepPDF@SetupDoc
12722   \csname PDF@SetupDoc\endcsname
12723 \def\PDF@SetupDoc{%
12724   \ifx\@baseurl\@empty
12725   \else
12726     \special{html:<base href="\@baseurl">}%
12727   \fi
12728   \keepPDF@SetupDoc
12729 }

12730 \Hy@WrapperDef\hyper@anchor#1{%
12731   \Hy@SaveLastskip
12732   \Hy@VerboseAnchor{#1}%
12733   \begingroup
12734     \let\protect=\string
12735     \special{html:<a name=%
12736       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12737   \endgroup
12738   \Hy@activeanchortrue
12739   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12740   \special{html:</a>}%

```

```

12741 \Hy@activeanchorfalse
12742 \Hy@RestoreLastskip
12743 }
12744 \Hy@WrapperDef\hyper@anchorstart#1{%
12745 \Hy@SaveLastskip
12746 \Hy@VerboseAnchor{#1}%
12747 \begingroup
12748 \hyper@chars
12749 \special{html:<a name=%
12750 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12751 \endgroup
12752 \Hy@activeanchortrue
12753 }
12754 \def\hyper@anchorend{%
12755 \special{html:</a>}%
12756 \Hy@activeanchorfalse
12757 \Hy@RestoreLastskip
12758 }
12759 \def\@urltype{url}
12760 \def\hyper@linkstart#1#2{%
12761 \Hy@VerboseLinkStart{#1}{#2}%
12762 \expandafter\Hy@colorlink\csname @#1color\endcsname
12763 \def\Hy@tempa{#1}%
12764 \ifx\Hy@tempa\@urltype
12765 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12766 \else
12767 \begingroup
12768 \hyper@chars
12769 \special{%
12770 html:<a href=%
12771 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
12772 }%
12773 \endgroup
12774 \fi
12775 }
12776 \def\hyper@linkend{%
12777 \special{html:</a>}%
12778 \Hy@endcolorlink
12779 }
12780 \def\hyper@linkfile#1#2#3{%
12781 \hyper@linkurl{#1}{%
12782 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12783 }%
12784 }
12785 \def\hyper@linkurl#1#2{%
12786 \leavevmode
12787 \ifHy@raiselinks
12788 \Hy@SaveSpaceFactor
12789 \Hy@SaveSavedSpaceFactor
12790 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12791 \Hy@RestoreSavedSpaceFactor
12792 \@linkdim\dp\@tempboxa
12793 \lower\@linkdim\hbox{%
12794 \hyper@chars
12795 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12796 }%
12797 \Hy@colorlink\@urlcolor

```

```

12798 \Hy@RestoreSpaceFactor
12799 #1\Hy@xspace@end
12800 \Hy@SaveSpaceFactor
12801 \@linkdim\ht\@tempboxa
12802 \advance\@linkdim by -6.5\p@
12803 \raise\@linkdim\hbox{\special{html:</a>}}%
12804 \Hy@endcolorlink
12805 \Hy@RestoreSpaceFactor
12806 \else
12807 \begingroup
12808 \hyper@chars
12809 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12810 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12811 \special{html:</a>}%
12812 \Hy@endcolorlink
12813 \endgroup
12814 \fi
12815 }

```

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

```

12816 \def\hyper@link#1#2#3{%
12817 \Hy@VerboseLinkStart{#1}{#2}%
12818 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
12819 }
12820 \def\hyper@image#1#2{%
12821 \begingroup
12822 \hyper@chars
12823 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12824 \endgroup
12825 }
12826 </textures>

```

47.12 dvipsone

```

12827 % \subsection{dvipsone driver}
12828 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12829 % |\special| commands.
12830 (*dvipsone)
12831 \providecommand*\XR@ext}{pdf}
12832 \let\Hy@raisedlink\ltx@empty
12833 \providecommand*\@pdfborder{0 0 1}
12834 \providecommand*\@pdfborderstyle{}
12835 \def\literalps@out#1{\special{ps:#1}}%
12836 \def\headerps@out#1{\special{headertext=#1}}%
12837 \input{pdfmark.def}%
12838 \ifx\@pdfproducer\relax
12839 \def\@pdfproducer{dvipsone + Distiller}%
12840 \fi
12841 \HyInfo@AddonUnsupportedtrue
12842 \def\PDF@FinishDoc{%
12843 \Hy@UseMaketitleInfos
12844 \HyInfo@TrappedUnsupported
12845 \special{PDF: Keywords \@pdfkeywords}%
12846 \special{PDF: Title \@pdftitle}%
12847 \special{PDF: Creator \@pdfcreator}%
12848 \ifx\@pdfcreationdate\@empty
12849 \else
12850 \special{PDF: CreationDate \@pdfcreationdate}%

```

```

12851 \fi
12852 \ifx\@pdfmoddate\@empty
12853 \else
12854 \special{PDF: ModDate \@pdfmoddate}%
12855 \fi
12856 \special{PDF: Author \@pdfauthor}%
12857 \ifx\@pdfproducer\relax
12858 \else
12859 \special{PDF: Producer \@pdfproducer}%
12860 \fi
12861 \special{PDF: Subject \@pdfsubject}%
12862 \Hy@DisableOption{pdfauthor}%
12863 \Hy@DisableOption{pdftitle}%
12864 \Hy@DisableOption{pdfsubject}%
12865 \Hy@DisableOption{pdfcreator}%
12866 \Hy@DisableOption{pdfcreationdate}%
12867 \Hy@DisableOption{pdfmoddate}%
12868 \Hy@DisableOption{pdfproducer}%
12869 \Hy@DisableOption{pdfkeywords}%
12870 \Hy@DisableOption{pdftrapped}%
12871 \Hy@DisableOption{pdfinfo}%
12872 }
12873 \def\PDF@SetupDoc{%
12874 \def\Hy@temp{}%
12875 \ifx\@pdfstartpage\@empty
12876 \else
12877 \ifx\@pdfstartview\@empty
12878 \else
12879 \edef\Hy@temp{%
12880 ,Page=\@pdfstartpage
12881 ,View=\@pdfstartview
12882 }%
12883 \fi
12884 \fi
12885 \edef\Hy@temp{%
12886 \noexpand\pdfmark{%
12887 pdfmark=/DOCVIEW,%
12888 PageMode=/\@pdfpagemode
12889 \Hy@temp
12890 }%
12891 }%
12892 \Hy@temp
12893 \ifx\@pdfpagescrop\@empty
12894 \else
12895 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12896 \fi
12897 \edef\Hy@temp{%
12898 \ifHy@pdftoolbar\else /HideToolbar true\fi
12899 \ifHy@pdfmenubar\else /HideMenubar true\fi
12900 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12901 \ifHy@pdfwindow /FitWindow true\fi
12902 \ifHy@pdfcenterwindow /CenterWindow true\fi
12903 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12904 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12905 \Hy@UseNameKey{Direction}\@pdfdirection
12906 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12907 \Hy@UseNameKey{ViewClip}\@pdfviewclip

```

```

12908 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12909 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12910 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12911 \Hy@UseNameKey{Duplex}\@pdfduplex
12912 \ifx\@pdfpicktraybypdfsize\@empty
12913 \else
12914 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12915 \fi
12916 \ifx\@pdfprintpagerange\@empty
12917 \else
12918 /PrintPageRange[\@pdfprintpagerange]%
12919 \fi
12920 \ifx\@pdfnumcopies\@empty
12921 \else
12922 /NumCopies \@pdfnumcopies
12923 \fi
12924 }%
12925 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12926 \pdfmark{%
12927 pdfmark=/PUT,%
12928 Raw={%
12929 \string{Catalog\string}<<%
12930 \ifx\Hy@temp\@empty
12931 \else
12932 /ViewerPreferences<<\Hy@temp>>%
12933 \fi
12934 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12935 \ifx\@pdflang\relax
12936 \else
12937 /Lang(\@pdflang)%
12938 \fi
12939 \ifx\@baseurl\@empty
12940 \else
12941 /URI<</Base(\Hy@pstringB)>>%
12942 \fi
12943 >>%
12944 }%
12945 }%
12946 }
12947 \providecommand*\@pdfview{XYZ}
12948 \providecommand*\@pdfviewparams{ %
12949 gsave revscl currentpoint grestore %
12950 72 add exch pop null exch null%
12951 }
12952 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

12953 \g@addto@macro\Hy@FirstPageHook{%
12954 \headerps@out{%

```

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

```

12955 /DvipsToPDF { 65781 div } def%
12956 /PDFToDvips { 65781 mul } def%
12957 /BPToDvips{65781 mul}def%

```

```

12958 /HyperBorder { 1 PDFToDvips } def%
12959 /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.
12960 /BorderArrayPatch{%
12961   [exch{%
12962     dup dup type/integertype eq exch type/realtype eq or%
12963     {BPToDvips}if%
12964   }forall]%
12965 }def%
12966 /H.S {%
12967   currentpoint %
12968   HyperBorder add /pdf@lly exch def %
12969   dup DvipsToPDF 72 add /pdf@hoff exch def %
12970   HyperBorder sub /pdf@llx exch def%
12971 } def%
12972 /H.L {%
12973   2 sub %
12974   PDFToDvips /HyperBase exch def %
12975   currentpoint %
12976   HyperBase sub /pdf@ury exch def%
12977   /pdf@urx exch def%
12978 } def%
12979 /H.A {%
12980   H.L %
12981   currentpoint exch pop %
12982   HyperBase sub % baseline skip
12983   DvipsToPDF /pdf@voff exch def%
12984 } def%
12985 /H.R {%
12986   currentpoint %
12987   HyperBorder sub /pdf@ury exch def %
12988   HyperBorder add /pdf@urx exch def %
12989   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12990 } def%
12991 }%
12992 }
12993 \def\setpdfinkmargin#1{%
12994   \begingroup
12995     \setlength{\dimen@}{#1}%
12996     \literalps@out{%
12997       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12998     }%
12999   \endgroup
13000 }
13001 </dvipsone>

```

47.13 TeX4ht

```

13002 (*tex4ht)
13003 \providecommand*\XR@ext{\html}
13004 \let\Hy@raisedlink\ltx@empty
13005 \@ifpackageloaded{tex4ht}{%
13006   \Hy@InfoNoLine{tex4ht is already loaded}%
13007 }{%
13008   \RequirePackage[hTeX4ht]{tex4ht}%

```

```

13009 }
13010 \hyperlinkfileprefix{}
13011 \let\PDF@FinishDoc\ltx@empty
13012 \def\PDF@SetupDoc{%
13013   \ifx\@baseurl\@empty
13014   \else
13015     \special{t4ht=<base href="\@baseurl">}%
13016   \fi
13017 }
13018 \Hy@WrapperDef\hyper@anchor#1{%
13019   \Hy@SaveLastskip
13020   \Hy@VerboseAnchor{#1}%
13021   \begingroup
13022     \let\protect=\string
13023     \special{t4ht=<a name=%
13024       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13025   \endgroup
13026   \Hy@activeanchortrue
13027   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13028   \special{t4ht=</a>}%
13029   \Hy@activeanchorfalse
13030   \Hy@RestoreLastskip
13031 }
13032 \Hy@WrapperDef\hyper@anchorstart#1{%
13033   \Hy@SaveLastskip
13034   \Hy@VerboseAnchor{#1}%
13035   \begingroup
13036     \hyper@chars\special{t4ht=<a name=%
13037       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13038   \endgroup
13039   \Hy@activeanchortrue
13040 }
13041 \def\hyper@anchorend{%
13042   \special{t4ht=</a>}%
13043   \Hy@activeanchorfalse
13044   \Hy@RestoreLastskip
13045 }
13046 \def\@urltype{url}
13047 \def\hyper@linkstart#1#2{%
13048   \Hy@VerboseLinkStart{#1}{#2}%
13049   \expandafter\Hy@colorlink\csname @#1color\endcsname
13050   \def\Hy@tempa{#1}%
13051   \ifx\Hy@tempa\@urltype
13052     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13053   \else
13054     \begingroup
13055       \hyper@chars
13056       \special{t4ht=<a href=%
13057         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
13058     \endgroup
13059   \fi
13060 }
13061 \def\hyper@linkend{%
13062   \special{t4ht=</a>}%
13063   \Hy@endcolorlink
13064 }
13065 \def\hyper@linkfile#1#2#3{%

```

```

13066 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13067 }
13068 \def\hyper@linkurl#1#2{%
13069 \leavevmode
13070 \ifHy@raiselinks
13071 \Hy@SaveSpaceFactor
13072 \Hy@SaveSavedSpaceFactor
13073 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13074 \Hy@RestoreSavedSpaceFactor
13075 \@linkdim\dp\@tempboxa
13076 \lower\@linkdim\hbox{%
13077 \begingroup
13078 \hyper@chars
13079 \special{%
13080 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13081 }%
13082 \endgroup
13083 }%
13084 \Hy@colorlink\@urlcolor
13085 \Hy@RestoreSpaceFactor
13086 #1\Hy@xspace@end
13087 \Hy@SaveSpaceFactor
13088 \Hy@endcolorlink
13089 \@linkdim\ht\@tempboxa
13090 \advance\@linkdim by -6.5\p@
13091 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13092 \Hy@RestoreSpaceFactor
13093 \else
13094 \begingroup
13095 \hyper@chars
13096 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13097 \Hy@colorlink\@urlcolor
13098 #1\Hy@xspace@end
13099 \Hy@endcolorlink
13100 \special{t4ht=</a>}}%
13101 \endgroup
13102 \fi
13103 }

```

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

```

13104 \def\hyper@link#1#2#3{%
13105 \Hy@VerboseLinkStart{#1}{#2}%
13106 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
13107 }
13108 \def\hyper@image#1#2{%
13109 \begingroup
13110 \hyper@chars
13111 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13112 \endgroup
13113 }
13114 \let\autoref\ref
13115 \ifx \rEFLiNK \UnDef
13116 \def\rEFLiNK #1#2{#2}%
13117 \fi
13118 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

13119 \AtBeginDocument{%
13120 \expandafter

```

```

13121 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13122 \expandafter\def\csname Make:Label\endcsname#1#2{%
13123   \ifhmode
13124     \Hy@SaveSpaceFactor
13125   \else
13126     \global\Hy@SavedSpaceFactor=1000 %
13127   \fi
13128   \Hy@OrgMakeLabel{#1}{%
13129     \Hy@RestoreSpaceFactor
13130     #2\Hy@xspace@end%
13131     \Hy@SaveSpaceFactor
13132   }%
13133   \Hy@RestoreSpaceFactor
13134 }%
13135 }
13136 \</tex4ht>
13137 \< *tex4htcfg>
13138 \IfFileExists{\jobname.cfg}{\endinput}{}
13139 \Preamble{html}
13140 \begin{document}%
13141 \EndPreamble
13142 \def\TeX{\TeX}
13143 \def\OMEGA{\Omega}
13144 \def\LaTeX{\LaTeX}
13145 \def\LaTeXe{\LaTeX2e}
13146 \def\TeXe{\TeX}
13147 \def\MF{Metafont}
13148 \def\MP{MetaPost}
13149 \</tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13150 \< *pdfmark>
13151 \long\def\@Form[#1]{%
13152 \g@addto@macro\Hy@FirstPageHook{%
13153   \headerps@out{%
13154     [%
13155       /_objdef{pdfDocEncoding}%
13156       /type/dict%
13157       /OBJ pdfmark%
13158     [%
13159       {pdfDocEncoding}%
13160       <<%
13161         /Type/Encoding%
13162         /Differences[%
13163           24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13164           /tilde %
13165           39/quotesingle %
13166           96/grave %
13167           128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13168           /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13169           /quotedblbase/quotedblleft/quotedblright/quoteleft%
13170           /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13171           /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13172           164/currency %
13173           166/brokenbar %

```

13174 168/dieresis/copyright/ordfeminine %
13175 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13176 /twosuperior/threesuperior/acute/mu %
13177 183/periodcentered/cedilla/onesuperior/ordmasculine %
13178 188/onequarter/onehalf/threequarters %
13179 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13180 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13181 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13182 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13183 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13184 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13185 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13186 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13187 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
13188 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13189]%
13190 >>%
13191 /PUT pdfmark%
13192 [%
13193 /_objdef{ZaDb}%
13194 /type/dict%
13195 /OBJ pdfmark%
13196 [%
13197 {ZaDb}%
13198 <<%
13199 /Type/Font%
13200 /Subtype/Type1%
13201 /Name/ZaDb%
13202 /BaseFont/ZapfDingbats%
13203 >>%
13204 /PUT pdfmark%
13205 [%
13206 /_objdef{Helv}%
13207 /type/dict%
13208 /OBJ pdfmark%
13209 [%
13210 {Helv}%
13211 <<%
13212 /Type/Font%
13213 /Subtype/Type1%
13214 /Name/Helv%
13215 /BaseFont/Helvetica%
13216 /Encoding{pdfDocEncoding}%
13217 >>%
13218 /PUT pdfmark%
13219 [%
13220 /_objdef{aform}%
13221 /type/dict%
13222 /OBJ pdfmark%
13223 [%
13224 /_objdef{afields}%
13225 /type/array%
13226 /OBJ pdfmark%
13227 [%
13228 /_objdef{corder}%
13229 /type/array%
13230 /OBJ pdfmark%

```

13231 {%
13232 [%
13233   /BBox[0 0 100 100]%
13234   /_objdef{Check}%
13235 /BP pdfmark %
13236 1 0 0 setrgbcolor%
13237 /ZapfDingbats 80 selectfont %
13238 20 20 moveto%
13239 (4)show%
13240 [/EP pdfmark%
13241 [%
13242   /BBox[0 0 100 100]%
13243   /_objdef{Cross}%
13244 /BP pdfmark %
13245 1 0 0 setrgbcolor%
13246 /ZapfDingbats 80 selectfont %
13247 20 20 moveto%
13248 (8)show%
13249 [/EP pdfmark%
13250 [%
13251   /BBox[0 0 250 100]%
13252   /_objdef{Submit}%
13253 /BP pdfmark %
13254 0.6 setgray %
13255 0 0 250 100 rectfill %
13256 1 setgray %
13257 2 2 moveto %
13258 2 98 lineto %
13259 248 98 lineto %
13260 246 96 lineto %
13261 4 96 lineto %
13262 4 4 lineto %
13263 fill %
13264 0.34 setgray %
13265 248 98 moveto %
13266 248 2 lineto %
13267 2 2 lineto %
13268 4 4 lineto %
13269 246 4 lineto %
13270 246 96 lineto %
13271 fill%
13272 /Helvetica 76 selectfont %
13273 0 setgray %
13274 8 22.5 moveto%
13275 (Submit)show%
13276 [/EP pdfmark%
13277 [%
13278   /BBox[0 0 250 100]%
13279   /_objdef{SubmitP}%
13280 /BP pdfmark %
13281 0.6 setgray %
13282 0 0 250 100 rectfill %
13283 0.34 setgray %
13284 2 2 moveto %
13285 2 98 lineto %
13286 248 98 lineto %
13287 246 96 lineto %

```

```

13288 4 96 lineto %
13289 4 4 lineto %
13290 fill %
13291 1 setgray %
13292 248 98 moveto %
13293 248 2 lineto %
13294 2 2 lineto %
13295 4 4 lineto %
13296 246 4 lineto %
13297 246 96 lineto %
13298 fill%
13299 /Helvetica 76 selectfont %
13300 0 setgray %
13301 10 20.5 moveto%
13302 (Submit)show%
13303 [/EP pdfmark%
13304 } ?pdfmark%
13305 [%
13306 {aform}%
13307 <<%
13308 /Fields{afields}%
13309 /DR<<%
13310 /Font<<%
13311 /ZaDb{ZaDb}%
13312 /Helv{Helv}%
13313 >>%
13314 >>%
13315 /DA(/Helv 10 Tf 0 g)%
13316 /CO{corder}%
13317 \ifHy@pdfa
13318 \else
13319 \ifHyField@NeedAppearances
13320 /NeedAppearances true%
13321 \fi
13322 \fi
13323 >>%
13324 /PUT pdfmark%
13325 [%
13326 {Catalog}%
13327 <<%
13328 /AcroForm{aform}%
13329 >>%
13330 /PUT pdfmark%
13331 }}%
13332 \kvsetkeys{Form}{#1}%
13333 }
13334 \let\@endForm\ltx@empty
13335 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13336 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13337 }

13338 \newcount\HyField@AnnotCount
13339 \HyField@AnnotCount=\z@
13340 \def\HyField@AdvanceAnnotCount{%
13341 \global\advance\HyField@AnnotCount\@ne
13342 }
13343 \def\HyField@TheAnnotCount{%
13344 \the\HyField@AnnotCount

```

```

13345 }
13346 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13347 \def\HyField@AddToFields#1{%
13348   \pdfmark{%
13349     pdfmark=/APPEND,%
13350     Raw={%
13351       \string{afields\string}%
13352       \string{#1\HyField@TheAnnotCount\string}%
13353     }%
13354   }%
13355   \ifx\Fld@calculate@code\ltx@empty
13356   \else
13357     \pdfmark{%
13358       pdfmark=/APPEND,%
13359       Raw={%
13360         \string{corder\string}%
13361         \string{#1\HyField@TheAnnotCount\string}%
13362       }%
13363     }%
13364   \fi
13365 }

13366 \def\@TextField[#1]#2{% parameters, label
13367   \def\Fld@name{#2}%
13368   \let\Fld@default\ltx@empty
13369   \let\Fld@value\@empty
13370   \def\Fld@width{\DefaultWidthofText}%
13371   \def\Fld@height{%
13372     \ifFld@multiline
13373       \DefaultHeightofTextMultiline
13374     \else
13375       \DefaultHeightofText
13376     \fi
13377   }%
13378   \begingroup
13379     \expandafter\HyField@SetKeys\expandafter{%
13380       \DefaultOptionsofText,#1%
13381     }%
13382     \HyField@FlagsText
13383     \ifFld@hidden\def\Fld@width{1sp}\fi
13384     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13385     \HyField@AdvanceAnnotCount
13386     \LayoutTextField{#2}{%
13387       \leavevmode
13388       \Hy@escapeform\PDFForm@Text
13389       \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13390         pdfmark=/ANN,%
13391         objdef=text\HyField@TheAnnotCount,%
13392         Raw={\PDFForm@Text}%
13393       }%
13394     }%
13395     \HyField@AddToFields{text}%
13396   \endgroup
13397 }

13398 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13399   \def\Fld@name{#2}%
13400   \let\Fld@default\relax

```

```

13401 \let\Fld@value\relax
13402 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13403 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13404 \begingroup
13405   \Fld@menulength=0 %
13406   \@tempdima\z@
13407   \@for\@curropt:=#3\do{%
13408     \expandafter\Fld@checkequals\@curropt==\%
13409     \Hy@StepCount\Fld@menulength
13410     \settowidth{\@tempdimb}{\@currDisplay}%
13411     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13412   }%
13413   \advance\@tempdima by 15\p@
13414   \begingroup
13415     \HyField@SetKeys{#1}%
13416   \edef\x{\endgroup
13417     \noexpand\expandafter
13418     \noexpand\HyField@SetKeys
13419     \noexpand\expandafter{%
13420       \expandafter\noexpand\curname DefaultOptionsof%
13421       \ifFld@radio
13422         Radio%
13423       \else
13424         \ifFld@combo
13425           \ifFld@popdown
13426             PopdownBox%
13427           \else
13428             ComboBox%
13429           \fi
13430         \else
13431           ListBox%
13432         \fi
13433       \fi
13434     \endcurname
13435   }%
13436 } \x
13437 \HyField@SetKeys{#1}%
13438 \ifFld@hidden\def\Fld@width{1sp}\fi
13439 \ifx\Fld@value\relax
13440   \let\Fld@value\Fld@default
13441 \fi
13442 \LayoutChoiceField{#2}{%
13443   \ifFld@radio
13444     \HyField@FlagsRadioButton
13445     \@@Radio{#3}%
13446   \else
13447     \begingroup
13448       \HyField@FlagsChoice
13449       \ifdim\Fld@width<\@tempdima
13450         \ifdim\@tempdima<1cm\@tempdima1cm\fi
13451       \edef\Fld@width{\the\@tempdima}%
13452     \fi
13453     \ifFld@combo
13454     \else
13455       \@tempdima=\the\Fld@menulength\Fld@charsize
13456       \advance\@tempdima by \Fld@borderwidth bp %
13457       \advance\@tempdima by \Fld@borderwidth bp %

```

```

13458         \edef\Fld@height{\the\@tempdima}%
13459         \fi
13460         \@@ListBox{#3}%
13461     \endgroup
13462 \fi
13463 }%
13464 \endgroup
13465 }
13466 \def\@@Radio#1{%
13467     \Fld@listcount=0 %
13468     \EdefEscapeName\Fld@default{\Fld@default}%
13469     \@for\@curropt:=#1\do{%
13470         \expandafter\Fld@checkequals\@curropt==\%
13471         \EdefEscapeName\@currValue{\@currValue}%
13472         \Hy@StepCount\Fld@listcount
13473         \@currDisplay\space
13474         \Hy@escapeform\PDFForm@Radio
13475         \ifnum\Fld@listcount=1 %
13476             \HyField@AdvanceAnnotCount
13477         \fi
13478         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13479             pdfmark=/ANN,%
13480             objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13481             Raw={%
13482                 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13483             }%
13484         } % deliberate space between radio buttons
13485         \ifnum\Fld@listcount=1 %
13486             \HyField@AddToFields{radio}%
13487         \fi
13488     }%
13489 }
13490 \newcount\Fld@listcount
13491 \def\@@ListBox#1{%
13492     \HyField@PDFChoices{#1}%
13493     \Hy@escapeform\PDFForm@List
13494     \HyField@AdvanceAnnotCount
13495     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13496         pdfmark=/ANN,%
13497         objdef=list\HyField@TheAnnotCount,%
13498         Raw={\PDFForm@List}%
13499     }%
13500     \HyField@AddToFields{list}%
13501 }
13502 \def\@PushButton[#1]#2{% parameters, label
13503     \def\Fld@name{#2}%
13504     \begingroup
13505         \expandafter\HyField@SetKeys\expandafter{%
13506             \DefaultOptionsofPushButton,#1%
13507         }%
13508     \ifHy@pdfa
13509         \Hy@Error{%
13510             PDF/A: Push button with JavaScript is prohibited%
13511         }\@ehc
13512     \LayoutPushButtonField{%
13513         \leavevmode
13514         \MakeButtonField{#2}%

```

```

13515 }%
13516 \else
13517 \HyField@FlagsPushButton
13518 \ifFld@hidden\def\Fld@width{1sp}\fi
13519 \HyField@AdvanceAnnotCount
13520 \LayoutPushButtonField{%
13521 \leavevmode
13522 \Hy@escapeform\PDFForm@Push
13523 \pdfmark[\MakeButtonField{#2}]{%
13524 pdfmark=/ANN,%
13525 objdef=push\HyField@TheAnnotCount,%
13526 Raw={\PDFForm@Push}%
13527 }%
13528 }%
13529 \HyField@AddToFields{push}%
13530 \fi
13531 \endgroup
13532 }
13533 \def\@Submit[#1]#2{%
13534 \def\Fld@width{\DefaultWidthofSubmit}%
13535 \def\Fld@height{\DefaultHeightofSubmit}%
13536 \begingroup
13537 \expandafter\HyField@SetKeys\expandafter{%
13538 \DefaultOptionsofSubmit,#1%
13539 }%
13540 \HyField@FlagsPushButton
13541 \HyField@FlagsSubmit
13542 \ifFld@hidden\def\Fld@width{1sp}\fi
13543 \Hy@escapeform\PDFForm@Submit
13544 \HyField@AdvanceAnnotCount
13545 \pdfmark[\MakeButtonField{#2}]{%
13546 pdfmark=/ANN,%
13547 objdef=submit\HyField@TheAnnotCount,%
13548 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13549 }%
13550 \HyField@AddToFields{submit}%
13551 \endgroup
13552 }
13553 \def\@Reset[#1]#2{%
13554 \def\Fld@width{\DefaultWidthofReset}%
13555 \def\Fld@height{\DefaultHeightofReset}%
13556 \begingroup
13557 \expandafter\HyField@SetKeys\expandafter{%
13558 \DefaultOptionsofReset,#1%
13559 }%
13560 \leavevmode
13561 \ifHy@pdfa
13562 \Hy@Error{%
13563 PDF/A: Reset action is prohibited%
13564 }\@ehc
13565 \MakeButtonField{#2}%
13566 \else
13567 \HyField@FlagsPushButton
13568 \ifFld@hidden\def\Fld@width{1sp}\fi
13569 \Hy@escapeform\PDFForm@Reset
13570 \HyField@AdvanceAnnotCount
13571 \pdfmark[\MakeButtonField{#2}]{%

```

```

13572 pdfmark=/ANN,%
13573 objdef=reset\HyField@TheAnnotCount,%
13574 Raw={\PDFForm@Reset}%
13575 }%
13576 \HyField@AddToFields{reset}%
13577 \fi
13578 \endgroup
13579 }%
13580 \def\@CheckBox[#1]#2{% parameters, label
13581 \def\Fld@name{#2}%
13582 \def\Fld@default{0}%
13583 \begingroup
13584 \def\Fld@width{\DefaultWidthofCheckBox}%
13585 \def\Fld@height{\DefaultHeightofCheckBox}%
13586 \expandafter\HyField@SetKeys\expandafter{%
13587 \DefaultOptionsofCheckBox,#1%
13588 }%
13589 \HyField@FlagsCheckBox
13590 \ifFld@hidden\def\Fld@width{1sp}\fi
13591 \HyField@AdvanceAnnotCount
13592 \LayoutCheckField{#2}{%
13593 \leavevmode
13594 \Hy@escapeform\PDFForm@Check
13595 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13596 pdfmark=/ANN,%
13597 objdef=check\HyField@TheAnnotCount,%
13598 Raw={\PDFForm@Check}%
13599 }%
13600 }%
13601 \HyField@AddToFields{check}%
13602 \endgroup
13603 }
13604 \pdfmark

```

48.2 HyperTeX

```

13605 \def\@Form[#1]{%
13606 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13607 }
13608 \let\@endForm\ltx@empty
13609 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13610 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13611 }
13612 \def\@TextField[#1]#2{% parameters, label
13613 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13614 }
13615 \def\@CheckBox[#1]#2{% parameters, label
13616 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13617 }
13618 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13619 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13620 }
13621 \def\@PushButton[#1]#2{% parameters, label
13622 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13623 }
13624 \def\@Reset[#1]#2{%
13625 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13626 }

```

```

13627 }
13628 \def\@Submit[#1]#2{%
13629   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13630 }
13631 \</hypertex>

```

48.3 TeX4ht

```

13632 \*tex4ht
13633 \def\@Form[#1]{%
13634   \kvsetkeys{Form}{#1}%
13635   \HCode{<form action="\Form@action" method="\Form@method">}%
13636 }
13637 \def\@endForm{\HCode{</form>}}
13638 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13639   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13640 }
13641 \def\@TextField[#1]#2{% parameters, label
13642   \let\Hy@reserved@a\@empty
13643   \def\Fld@name{#2}%
13644   \let\Fld@default\ltx@empty
13645   \bgroup
13646     \Field@toks={ }%
13647     \kvsetkeys{Field}{#1}%
13648     \HCode{<label for="\Fld@name">#2</label>}%
13649     \ifFld@password
13650       \@@PasswordField
13651     \else
13652       \@@TextField
13653     \fi
13654   \egroup
13655 }
13656 \def\@@PasswordField{%
13657   \HCode{%
13658     <input type="password" %
13659     id="\Fld@name" %
13660     name="\Fld@name" %
13661     \ifFld@hidden type="hidden" \fi
13662     value="\Fld@default" %
13663     \the\Field@toks
13664     >%
13665   }%
13666 }
13667 \def\@@TextField{%
13668   \ifFld@multiline
13669     \HCode{<textarea %
13670       \ifFld@readonly readonly \fi
13671       id="\Fld@name" %
13672       name="\Fld@name" %
13673       \ifFld@hidden type="hidden" \fi
13674       \the\Field@toks>%
13675     }%
13676     \Fld@default
13677     \HCode{</textarea>}%
13678   \else
13679     \HCode{<input type="text" %
13680       \ifFld@readonly readonly \fi
13681       id="\Fld@name" %

```

```

13682     name="\Fld@name" %
13683     \ifFld@hidden type="hidden" \fi
13684     value="\Fld@default" %
13685     \the\Field@toks>%
13686   }%
13687 \fi
13688 }
13689 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13690 \def\Fld@name{#2}%
13691 \let\Fld@default\ltx@empty
13692 \let\Hy@reserved@a\relax
13693 \begingroup
13694 \expandafter\Fld@findlength#3\\%
13695 \Field@toks={ }%
13696 \kvsetkeys{Field}{#1}%
13697 #2%
13698 \ifFld@radio
13699 \expandafter\@@Radio#3\\%
13700 \else
13701 \expandafter\@@Menu#3\\%
13702 \fi
13703 \endgroup
13704 }
13705 \def\Fld@findlength#1\\{%
13706 \Fld@menulength=0 %
13707 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13708 }
13709 \def\@@Menu#1\\{%
13710 \HCode{<select size="\the\Fld@menulength" %
13711   name="\Fld@name" %
13712   \the\Field@toks>%
13713 }%
13714 \@for\@curropt:=#1\do{%
13715 \expandafter\Fld@checkequals\@curropt==\\%
13716 \HCode{<option %
13717   \ifx\@curropt\Fld@default selected \fi
13718   value="\@currValue">\@currDisplay</option>%
13719 }%
13720 }%
13721 \HCode{</select>}%
13722 }
13723 \def\@@Radio#1\\{%
13724 \@for\@curropt:=#1\do{%
13725 \expandafter\Fld@checkequals\@curropt==\\%
13726 \HCode{<input type="radio" %
13727   \ifx\@curropt\Fld@default checked \fi
13728   name="\Fld@name" %
13729   value="\@currValue" %
13730   \the\Field@toks>%
13731 }%
13732 \@currDisplay
13733 }%
13734 }
13735 \def\@PushButton[#1]#2{% parameters, label
13736 \def\Fld@name{#2}%
13737 \bgroup
13738 \Field@toks={ }%

```

```

13739 \kvsetkeys{Field}{#1}%
13740 \HCode{<input type="button" %
13741   name="\Fld@name" %
13742   value="#2" %
13743   \the\Field@toks>%
13744 }%
13745 \HCode{</button>}%
13746 \egroup
13747 }
13748 \def\@Submit[#1]#2{%
13749 \HCode{<button type="submit">#2</button>}%
13750 }
13751 \def\@Reset[#1]#2{%
13752 \HCode{<button type="reset">#2</button>}%
13753 }
13754 \def\@CheckBox[#1]#2{% parameters, label
13755 \let\Hy@reserved@a\@empty
13756 \def\Fld@name{#2}%
13757 \def\Fld@default{0}%
13758 \bgroup
13759 \Field@toks={ }%
13760 \kvsetkeys{Field}{#1}%
13761 \HCode{<input type="checkbox" %
13762   \ifFld@checked checked \fi
13763   \ifFld@disabled disabled \fi
13764   \ifFld@readonly readonly \fi
13765   name="\Fld@name" %
13766   \ifFld@hidden type="hidden" \fi
13767   value="\Fld@default" %
13768   \the\Field@toks>%
13769   #2%
13770 }%
13771 \egroup
13772 }
13773 </tex4ht>

```

48.4 pdfTeX

```

13774 <*pdfTeX>
13775 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13776 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13777 }
13778 \def\MakeFieldObject#1#2{\sbox0{#1}%
13779 \immediate\pdfxform0 %
13780 \expandafter\edef\csname #2Object\endcsname{%
13781 \the\pdfastxform\space 0 R%
13782 }%
13783 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13784 }%
13785 \let\HyField@afields\ltx@empty
13786 \let\HyField@cofields\ltx@empty
13787 \begingroup\expandafter\expandafter\expandafter\endgroup
13788 \expandafter\ifx\csname pdfastlink\endcsname\relax
13789 \let\HyField@AddToFields\relax
13790 \PackageInfo{hyperref}{%
13791   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13792   \MessageBreak
13793   Adobe Reader/Acrobat accepts an empty /Field array,%

```

```

13794 \MessageBreak
13795 but other PDF viewers might complain%
13796 }%
13797 \else
13798 \let\HyField@AuxAddToFields\ltx@gobble
13799 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13800 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%

```

Insertion sort for calculation field list. In case of equal sort keys (for example, if ‘calculatesortkey’ is not used at all) the keys keep document calling order.

```

13801 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13802 \begingroup
13803 \Hy@safe@activetrue
13804 \let\ltx@secondoftwo\relax
13805 \ifx\HyField@cofields\ltx@empty
13806 \xdef\HyField@cofields{%
13807 \ltx@secondoftwo{#1}{ #2 0 R}%
13808 }%
13809 \else
13810 \let\ltx@secondoftwo\relax
13811 \def\HyField@AddCoField##1##2##3{%
13812 \ifx##1\ltx@empty
13813 \ltx@secondoftwo{#1}{ #2 0 R}%
13814 \expandafter\ltx@gobble
13815 \else
13816 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13817 \ltx@secondoftwo{#1}{ #2 0 R}%
13818 \ltx@secondoftwo{##2}{##3}%
13819 \expandafter\expandafter\expandafter\ltx@gobble
13820 \else
13821 \ltx@secondoftwo{##2}{##3}%
13822 \fi
13823 \fi
13824 \HyField@AddCoField
13825 }%
13826 \xdef\HyField@cofields{%
13827 \expandafter\HyField@AddCoField
13828 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13829 }%
13830 \fi
13831 \endgroup
13832 }%
13833 \Hy@AtBeginDocument{%
13834 \if@filesw
13835 \immediate\write\@mainaux{%
13836 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13837 }%
13838 \immediate\write\@mainaux{%
13839 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13840 }%
13841 \fi
13842 \let\HyField@AfterAuxOpen\@firstofone
13843 \def\HyField@AuxAddToFields#1{%
13844 \xdef\HyField@afields{%
13845 \ifx\HyField@afields\@empty
13846 \else
13847 \HyField@afields
13848 \space

```

```

13849     \fi
13850     #1 0 R%
13851   }%
13852 }%
13853 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13854 }%
13855 \def\HyField@AddToFields{%
13856   \expandafter\HyField@@AddToFields\expandafter{%
13857     \the\pdfastlink
13858   }%
13859   \ifx\Fld@calculate@code\ltx@empty
13860   \else
13861     \begingroup
13862     \Hy@safe@activetrue
13863     \edef\Hy@temp{%
13864       \endgroup
13865       \if@filesw
13866         \write\@mainaux{%
13867           \string\HyField@AuxAddToCoFields{%
13868             \Fld@calculate@sortkey
13869           }{%
13870             \the\pdfastlink
13871           }%
13872         }%
13873       \fi
13874     }%
13875     \Hy@temp
13876   \fi
13877 }%
13878 \def\HyField@@AddToFields#1{%
13879   \HyField@AfterAuxOpen{%
13880     \if@filesw
13881       \write\@mainaux{%
13882         \string\HyField@AuxAddToFields{#1}%
13883       }%
13884     \fi
13885   }%
13886 }%
13887 \fi
13888 \def\@Form[#1]{%
13889   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13890   \kvsetkeys{Form}{#1}%
13891   \pdf@ifdraftmode{}{%
13892     \Hy@FormObjects
13893     \ifnum\pdfTeXversion>13 %
13894       \pdfrefobj\OBJ@pdfdocencoding
13895       \pdfrefobj\OBJ@ZaDb
13896       \pdfrefobj\OBJ@Helv
13897     \fi
13898     \AtVeryEndDocument{%
13899       \immediate\pdfobj{%
13900         <<%
13901           /Fields[\HyField@afields]%
13902           \ifx\HyField@cofields\ltx@empty
13903           \else
13904             /CO[\romannumeral-'\Q\HyField@cofields]%
13905           \fi

```

```

13906      /DR<<%
13907      /Font<<%
13908      /ZaDb \OBJ@ZaDb\space 0 R%
13909      /Helv \OBJ@Helv\space 0 R%
13910      >>%
13911      >>%
13912      /DA(/Helv 10 Tf 0 g)%
13913      \ifHy@pdfa
13914      \else
13915      \ifHyField@NeedAppearances
13916      /NeedAppearances true%
13917      \fi
13918      \fi
13919      >>%
13920      }%
13921      \edef\OBJ@acroform{\the\pdfflastobj}%
13922      \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13923      }%
13924      }%
13925      \MakeFieldObject{%
Same as \ding{123} of package pifont.
13926      \begingroup
13927      \fontfamily{pzd}%
13928      \fontencoding{U}%
13929      \fontseries{m}%
13930      \fontshape{n}%
13931      \selectfont
13932      \char123 %
13933      \endgroup
13934      }{Ding}%
13935      \MakeFieldObject{%
13936      \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13937      }{Submit}%
13938      \MakeFieldObject{%
13939      \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13940      }{SubmitP}%
13941      }
13942      \let\@endForm\ltx@empty
13943      \let\HyAnn@AbsPageLabel\ltx@empty
13944      \let\Fld@pageobjref\ltx@empty
13945      \ltx@ifUndefined{pdfpageref}{%
13946      }{%
13947      \ltx@ifpackageloaded{zref-abspage}{%
13948      \newcount\HyAnn@Count
13949      \HyAnn@Count=\ltx@zero
13950      \def\HyAnn@AbsPageLabel{%
13951      \global\advance\HyAnn@Count by\ltx@one
13952      \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13953      \zref@refused{HyAnn@\the\HyAnn@Count}%
13954      }%
13955      \def\Fld@pageobjref{%
13956      \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13957      }{%
13958      \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13959      /P \pdfpageref
13960      \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13961      \space 0 R%

```

```

13962     }{%
13963     }%
13964     }%
13965     }%
13966 }{%
13967 }%
13968 }

13969 \def\@TextField[#1]#2{% parameters, label
13970   \def\Fld@name{#2}%
13971   \let\Fld@default\ltx@empty
13972   \let\Fld@value\@empty
13973   \def\Fld@width{\DefaultWidthofText}%
13974   \def\Fld@height{%
13975     \ifFld@multiline
13976       \DefaultHeightofTextMultiline
13977     \else
13978       \DefaultHeightofText
13979     \fi
13980   }%
13981   \begingroup
13982     \expandafter\HyField@SetKeys\expandafter{%
13983       \DefaultOptionsofText,#1%
13984     }%
13985     \PDFForm@Name
13986     \HyField@FlagsText
13987     \ifFld@hidden\def\Fld@width{1sp}\fi
13988     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13989     \LayoutTextField{#2}{%
13990       \leavevmode
13991       \HyAnn@AbsPageLabel
13992       \Hy@escapeform\PDFForm@Text
13993       \pdfstartlink user {\PDFForm@Text}\relax
13994       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13995       \HyField@AddToFields
13996     }%
13997   \endgroup
13998 }

13999 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14000   \def\Fld@name{#2}%
14001   \let\Fld@default\relax
14002   \let\Fld@value\relax
14003   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14004   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14005   \begingroup
14006     \Fld@menulength=0 %
14007     \@tempdima\z@
14008     \@for\@curropt:=#3\do{%
14009       \expandafter\Fld@checkequals\@curropt==\\%
14010       \Hy@StepCount\Fld@menulength
14011       \settowidth{\@tempdimb}{\@currDisplay}%
14012       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14013     }%
14014     \advance\@tempdima by 15\p@
14015     \begingroup
14016       \HyField@SetKeys{#1}%
14017     \edef\x{\endgroup
14018       \noexpand\expandafter

```

```

14019 \noexpand\HyField@SetKeys
14020 \noexpand\expandafter{%
14021 \expandafter\noexpand\csname DefaultOptionsof%
14022 \ifFld@radio
14023 Radio%
14024 \else
14025 \ifFld@combo
14026 \ifFld@popdown
14027 PopdownBox%
14028 \else
14029 ComboBox%
14030 \fi
14031 \else
14032 ListBox%
14033 \fi
14034 \fi
14035 \endcsname
14036 }%
14037 }\x
14038 \HyField@SetKeys{#1}%
14039 \PDFForm@Name
14040 \ifFld@hidden\def\Fld@width{1sp}\fi
14041 \ifx\Fld@value\relax
14042 \let\Fld@value\Fld@default
14043 \fi
14044 \LayoutChoiceField{#2}{%
14045 \ifFld@radio
14046 \HyField@FlagsRadioButton
14047 \@@Radio{#3}%
14048 \else
14049 \begingroup
14050 \HyField@FlagsChoice
14051 \ifdim\Fld@width<\@tempdima
14052 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14053 \edef\Fld@width{\the\@tempdima}%
14054 \fi
14055 \ifFld@combo
14056 \else
14057 \@tempdima=\the\Fld@menulength\Fld@charsize
14058 \advance\@tempdima by \Fld@borderwidth bp %
14059 \advance\@tempdima by \Fld@borderwidth bp %
14060 \edef\Fld@height{\the\@tempdima}%
14061 \fi
14062 \@@ListBox{#3}%
14063 \endgroup
14064 \fi
14065 }%
14066 \endgroup
14067 }
14068 \def\@@Radio#1{%
14069 \Fld@listcount=0 %
14070 \EdefEscapeName\Fld@default{\Fld@default}%
14071 \@for\@curropt:=#1\do{%
14072 \expandafter\Fld@checkequals\@curropt==\%
14073 \EdefEscapeName\@currValue{\@currValue}%
14074 \Hy@StepCount\Fld@listcount
14075 \@currDisplay\space

```

```

14076 \leavevmode
14077 \HyAnn@AbsPageLabel
14078 \Hy@escapeform\PDFForm@Radio
14079 \pdfstartlink user {%
14080 \PDFForm@Radio
14081 /AP<<%
14082 /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.

```

14083 \/\@currValue\space \DingObject
14084 >>%
14085 >>%
14086 }%
14087 \relax
14088 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14089 \ifnum\Fld@listcount=1 %
14090 \HyField@AddToFields
14091 \fi
14092 \space % deliberate space between radio buttons
14093 }%
14094 }
14095 \newcount\Fld@listcount
14096 \def\@@Listbox#1{%
14097 \HyField@PDFChoices{#1}%
14098 \leavevmode
14099 \HyAnn@AbsPageLabel
14100 \Hy@escapeform\PDFForm@List
14101 \pdfstartlink user {\PDFForm@List}\relax
14102 \MakeChoiceField{\Fld@width}{\Fld@height}%
14103 \pdfendlink
14104 \HyField@AddToFields
14105 }
14106 \def\@PushButton[#1]#2{% parameters, label
14107 \def\Fld@name{#2}%
14108 \begingroup
14109 \expandafter\HyField@SetKeys\expandafter{%
14110 \DefaultOptionsofPushButton,#1%
14111 }%
14112 \PDFForm@Name
14113 \ifHy@pdfa
14114 \Hy@Error{%
14115 PDF/A: Push button with JavaScript is prohibited%
14116 }\@ehc
14117 \LayoutPushButtonField{%
14118 \leavevmode
14119 \MakeButtonField{#2}%
14120 }%
14121 \else
14122 \HyField@FlagsPushButton
14123 \ifFld@hidden\def\Fld@width{1sp}\fi
14124 \LayoutPushButtonField{%
14125 \leavevmode
14126 \HyAnn@AbsPageLabel
14127 \Hy@escapeform\PDFForm@Push
14128 \pdfstartlink user {\PDFForm@Push}\relax
14129 \MakeButtonField{#2}%

```

```

14130     \pdfendlink
14131     \HyField@AddToFields
14132 }%
14133 \fi
14134 \endgroup
14135 }
14136 \def\@Submit[#1]#2{%
14137   \def\Fld@width{\DefaultWidthofSubmit}%
14138   \def\Fld@height{\DefaultHeightofSubmit}%
14139   \begingroup
14140     \expandafter\HyField@SetKeys\expandafter{%
14141       \DefaultOptionsofSubmit,#1%
14142     }%
14143     \HyField@FlagsPushButton
14144     \HyField@FlagsSubmit
14145     \ifFld@hidden\def\Fld@width{1sp}\fi
14146     \leavevmode
14147     \HyAnn@AbsPageLabel
14148     \Hy@escapeform\PDFForm@Submit
14149     \pdfstartlink user {%
14150       \PDFForm@Submit
14151       /AP<</N \SubmitObject/D \SubmitPObject>>%
14152     }%
14153     \relax
14154     \MakeButtonField{#2}%
14155     \pdfendlink
14156     \HyField@AddToFields
14157 \endgroup
14158 }
14159 \def\@Reset[#1]#2{%
14160   \def\Fld@width{\DefaultWidthofReset}%
14161   \def\Fld@height{\DefaultHeightofReset}%
14162   \begingroup
14163     \expandafter\HyField@SetKeys\expandafter{%
14164       \DefaultOptionsofReset,#1%
14165     }%
14166     \leavevmode
14167     \ifHy@pdfa
14168       \Hy@Error{%
14169         PDF/A: Reset action is prohibited%
14170       }\@ehc
14171       \MakeButtonField{#2}%
14172     \else
14173       \HyField@FlagsPushButton
14174       \ifFld@hidden\def\Fld@width{1sp}\fi
14175       \HyAnn@AbsPageLabel
14176       \Hy@escapeform\PDFForm@Reset
14177       \pdfstartlink user {\PDFForm@Reset}\relax
14178       \MakeButtonField{#2}%
14179       \pdfendlink
14180       \HyField@AddToFields
14181     \fi
14182 \endgroup
14183 }
14184 \def\@CheckBox[#1]#2{% parameters, label
14185   \def\Fld@name{#2}%
14186   \def\Fld@default{0}%

```

```

14187 \begingroup
14188 \def\Fld@width{\DefaultWidthofCheckBox}%
14189 \def\Fld@height{\DefaultHeightofCheckBox}%
14190 \expandafter\HyField@SetKeys\expandafter{%
14191   \DefaultOptionsofCheckBox,#1%
14192 }%
14193 \PDFForm@Name
14194 \HyField@FlagsCheckBox
14195 \ifFld@hidden\def\Fld@width{1sp}\fi
14196 \LayoutCheckField{#2}{%
14197   \leavevmode
14198   \HyAnn@AbsPageLabel
14199   \Hy@escapeform\PDFForm@Check
14200   \pdfstartlink user {\PDFForm@Check}\relax
14201   \MakeCheckField{\Fld@width}{\Fld@height}%
14202   \pdfendlink
14203   \HyField@AddToFields
14204 }%
14205 \endgroup
14206 }
14207 \def\Hy@FormObjects{%
14208   \pdfobj {%
14209     <<%
14210     /Type/Encoding%
14211     /Differences[%
14212       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14213       /ring/tilde %
14214       39/quotesingle %
14215       96/grave %
14216       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14217       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14218       /quotedblbase/quotedblleft/quotedblright/quoteleft%
14219       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14220       /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14221       164/currency %
14222       166/brokenbar %
14223       168/dieresis/copyright/ordfeminine %
14224       172/logicalnot/.notdef/registered/macron/degree/plusminus%
14225       /twosuperior/threesuperior/acute/mu %
14226       183/periodcentered/cedilla/onesuperior/ordmasculine %
14227       188/onequarter/onehalf/threequarters %
14228       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14229       /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14230       /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14231       /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14232       /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14233       /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14234       /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14235       /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14236       /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14237       /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14238     ]%
14239     >>%
14240   }%
14241   \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
14242   \pdfobj{%
14243     <<%

```

```

14244 /Type/Font%
14245 /Subtype/Type1%
14246 /Name/ZaDb%
14247 /BaseFont/ZapfDingbats%
14248 >>%
14249 }%
14250 \xdef\OBJ@ZaDb{\the\pdflastobj}%
14251 \pdfobj{%
14252 <<%
14253 /Type/Font%
14254 /Subtype/Type1%
14255 /Name/Helv%
14256 /BaseFont/Helvetica%
14257 /Encoding \OBJ@pdfdocencoding\space 0 R%
14258 >>%
14259 }%
14260 \xdef\OBJ@Helv{\the\pdflastobj}%
14261 \global\let\Hy@FormObjects\relax
14262 }
14263 \</pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14264 \<*dvipdfm | xetex>

```

\@Gauge

```

14265 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14266 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14267 }

```

\@Form

```

14268 \def\@Form[#1]{%
14269 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14270 \kvsetkeys{Form}{#1}%
14271 \Hy@FormObjects
14272 \@pdfm@mark{obj @afields []}%
14273 \@pdfm@mark{obj @corder []}%
14274 \@pdfm@mark{%
14275 obj @aform <<%
14276 /Fields @afields%
14277 /DR<<%
14278 /Font<<%
14279 /ZaDb @OBJZaDb%
14280 /Helv @OBJHelv%
14281 >>%
14282 >>%
14283 /DA(/Helv 10 Tf 0 g)%
14284 /CO @corder%
14285 \ifHy@pdfa
14286 \else
14287 \ifHyField@NeedAppearances
14288 /NeedAppearances true%
14289 \fi
14290 \fi
14291 >>%
14292 }%

```

```

14293 \pdfmark{put @catalog <</AcroForm @aform>>}%
14294 }

\@endForm
14295 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
14296 \def\dvipdfm@setdim{%
14297   height \the\ht\pdfm@box\space
14298   width \the\wd\pdfm@box\space
14299   depth \the\dp\pdfm@box\space
14300 }

\HyField@AnnotCount
14301 \newcount\HyField@AnnotCount
14302 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
14303 \def\HyField@AdvanceAnnotCount{%
14304   \global\advance\HyField@AnnotCount\@ne
14305 }

\HyField@TheAnnotCount
14306 \def\HyField@TheAnnotCount{%
14307   \the\HyField@AnnotCount
14308 }

\Fld@pageobjref
14309 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
14310 \def\HyField@AddToFields#1{%
14311   \pdfmark{put @afields @#1\HyField@TheAnnotCount}%
14312   \ifx\Fld@calculate@code\ltx@empty
14313   \else
14314     \pdfmark{put @corder @#1\HyField@TheAnnotCount}%
14315   \fi
14316 }

\@TextField
14317 \def\@TextField[#1]#2{% parameters, label
14318   \def\Fld@name{#2}%
14319   \let\Fld@default\ltx@empty
14320   \let\Fld@value\@empty
14321   \def\Fld@width{\DefaultWidthofText}%
14322   \def\Fld@height{%
14323     \ifFld@multiline
14324       \DefaultHeightofTextMultiline
14325     \else
14326       \DefaultHeightofText
14327     \fi
14328   }%
14329   \begingroup
14330     \expandafter\HyField@SetKeys\expandafter{%
14331       \DefaultOptionsofText,#1%
14332     }%

```

```

14333 \PDFForm@Name
14334 \HyField@FlagsText
14335 \ifFld@hidden\def\Fld@width{1sp}\fi
14336 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14337 \setbox\pdfm@box=\hbox{%
14338   \MakeTextField{\Fld@width}{\Fld@height}%
14339 }%
14340 \HyField@AdvanceAnnotCount
14341 \LayoutTextField{#2}{%
14342   \leavevmode
14343   \Hy@escapeform\PDFForm@Text
14344   \@pdfm@mark{%
14345     ann @text\HyField@TheAnnotCount\space
14346     \dvi pdfm@setdim << \PDFForm@Text >>%
14347   }%
14348 }%
14349 \unhbox\pdfm@box
14350 \HyField@AddToFields{text}%
14351 % record in @afields array
14352 \endgroup
14353 }

```

\@ChoiceMenu

```

14354 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14355   \def\Fld@name{#2}%
14356   \let\Fld@default\relax
14357   \let\Fld@value\relax
14358   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14359   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14360   \begingroup
14361     \Fld@menulength=0 %
14362     \@tempdima\z@
14363     \@for\@curropt:=#3\do{%
14364       \expandafter\Fld@checkequals\@curropt==\%
14365       \Hy@StepCount\Fld@menulength
14366       \settowidth{\@tempdimb}{\@currDisplay}%
14367       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14368     }%
14369     \advance\@tempdima by 15\p@
14370     \begingroup
14371       \HyField@SetKeys{#1}%
14372     \edef\x{\endgroup
14373       \noexpand\expandafter
14374       \noexpand\HyField@SetKeys
14375       \noexpand\expandafter{%
14376         \expandafter\noexpand\curname DefaultOptionsof%
14377         \ifFld@radio
14378           Radio%
14379         \else
14380           \ifFld@combo
14381             \ifFld@popdown
14382               PopdownBox%
14383             \else
14384               ComboBox%
14385             \fi
14386           \else
14387             ListBox%
14388           \fi

```

```

14389     \fi
14390     \endcsname
14391   }%
14392 } \x
14393 \HyField@SetKeys{#1}%
14394 \PDFForm@Name
14395 \ifFld@hidden\def\Fld@width{1sp}\fi
14396 \ifx\Fld@value\relax
14397   \let\Fld@value\Fld@default
14398 \fi
14399 \LayoutChoiceField{#2}{%
14400   \ifFld@radio
14401     \HyField@FlagsRadioButton
14402     \@@Radio{#3}%
14403   \else
14404     \begingroup
14405     \HyField@FlagsChoice
14406     \ifdim\Fld@width<\@tempdima
14407       \ifdim\@tempdima<1cm\@tempdima1cm\fi
14408       \edef\Fld@width{\the\@tempdima}%
14409     \fi
14410     \ifFld@combo
14411     \else
14412       \@tempdima=\the\Fld@menulength\Fld@charsize
14413       \advance\@tempdima by \Fld@borderwidth bp %
14414       \advance\@tempdima by \Fld@borderwidth bp %
14415       \edef\Fld@height{\the\@tempdima}%
14416     \fi
14417     \@@ListBox{#3}%
14418   \endgroup
14419 \fi
14420 }%
14421 \endgroup
14422 }

\@@Radio
14423 \def\@@Radio#1{%
14424   \Fld@listcount=0 %
14425   \EdefEscapeName\Fld@default{\Fld@default}%
14426   \setbox\pdfm@box=\hbox{%
14427     \MakeRadioField{\Fld@width}{\Fld@height}%
14428   }%
14429   \@for\@curropt:=#1\do{%
14430     \expandafter\Fld@checkequals\@curropt==\%
14431     \EdefEscapeName\@currValue{\@currValue}%
14432     \Hy@StepCount\Fld@listcount
14433     \@currDisplay\space
14434     \leavevmode
14435     \Hy@escapeform\PDFForm@Radio
14436     \ifnum\Fld@listcount=1 %
14437       \HyField@AdvanceAnnotCount
14438     \fi
14439     \@pdfm@mark{%
14440       ann %
14441       \ifnum\Fld@listcount=1 %
14442         @radio\HyField@TheAnnotCount%
14443       \space
14444     \fi

```

```

14445 \dvipdfm@setdim
14446 <<%
14447 \PDFForm@Radio
14448 /AP<</N<</\@currValue /null>>>>%
14449 >>%
14450 }%
14451 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14452 \ifnum\Fld@listcount=1 %
14453 \HyField@AddToFields{radio}%
14454 \fi
14455 }%
14456 }

\Fld@listcount
14457 \newcount\Fld@listcount

\@@Listbox
14458 \def\@@Listbox#1{%
14459 \HyField@PDFChoices{#1}%
14460 \setbox\pdfm@box=\hbox{%
14461 \MakeChoiceField{\Fld@width}{\Fld@height}%
14462 }%
14463 \leavevmode
14464 \Hy@escapeform\PDFForm@List
14465 \HyField@AdvanceAnnotCount
14466 \@pdfm@mark{%
14467 ann @list\HyField@TheAnnotCount\space
14468 \dvipdfm@setdim
14469 <<\PDFForm@List>>%
14470 }%
14471 \unhbox\pdfm@box
14472 \HyField@AddToFields{list}%
14473 }

\@PushButton
14474 \def\@PushButton[#1]#2{% parameters, label
14475 \def\Fld@name{#2}%
14476 \begingroup
14477 \expandafter\HyField@SetKeys\expandafter{%
14478 \DefaultOptionsofPushButton,#1%
14479 }%
14480 \PDFForm@Name
14481 \ifHy@pdfa
14482 \Hy@Error{%
14483 PDF/A: Push button with JavaScript is prohibited%
14484 }\@ehc
14485 \LayoutPushButtonField{%
14486 \leavevmode
14487 \MakeButtonField{#2}%
14488 }%
14489 \else
14490 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14491 \HyField@FlagsPushButton
14492 \ifFld@hidden\def\Fld@width{1sp}\fi
14493 \HyField@AdvanceAnnotCount
14494 \LayoutPushButtonField{%
14495 \leavevmode

```

```

14496     \Hy@escapeform\PDFForm@Push
14497     \@pdfm@mark{%
14498         ann @push\HyField@TheAnnotCount\space
14499         \dvipdfm@setdim
14500         <<\PDFForm@Push>>%
14501     }%
14502 }%
14503 \unhbox\pdfm@box
14504 \HyField@AddToFields{push}%
14505 \fi
14506 \endgroup
14507 }

\@Submit
14508 \def\@Submit[#1]#2{%
14509     \def\Fld@width{\DefaultWidthofSubmit}%
14510     \def\Fld@height{\DefaultHeightofSubmit}%
14511     \begingroup
14512     \expandafter\HyField@SetKeys\expandafter{%
14513         \DefaultOptionsofSubmit,#1%
14514     }%
14515     \HyField@FlagsPushButton
14516     \HyField@FlagsSubmit
14517     \ifFld@hidden\def\Fld@width{1sp}\fi
14518     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14519     \leavevmode
14520     \Hy@escapeform\PDFForm@Submit
14521     \HyField@AdvanceAnnotCount
14522     \@pdfm@mark{%
14523         ann @submit\HyField@TheAnnotCount\space
14524         \dvipdfm@setdim
14525         <<\PDFForm@Submit>>%
14526     }%
14527     \unhbox\pdfm@box%
14528     \HyField@AddToFields{submit}%
14529 \endgroup
14530 }

\@Reset
14531 \def\@Reset[#1]#2{%
14532     \def\Fld@width{\DefaultWidthofReset}%
14533     \def\Fld@height{\DefaultHeightofReset}%
14534     \begingroup
14535     \expandafter\HyField@SetKeys\expandafter{%
14536         \DefaultOptionsofReset,#1%
14537     }%
14538     \leavevmode
14539     \ifHy@pdfa
14540         \Hy@Error{%
14541             PDF/A: Reset action is prohibited%
14542         }\@ehc
14543         \MakeButtonField{#2}%
14544     \else
14545         \HyField@FlagsPushButton
14546         \ifFld@hidden\def\Fld@width{1sp}\fi
14547         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14548         \Hy@escapeform\PDFForm@Reset

```

```

14549 \HyField@AdvanceAnnotCount
14550 \@pdfm@mark{%
14551 ann @reset\HyField@TheAnnotCount\space
14552 \dvipdfm@setdim
14553 <<\PDFForm@Reset>>%
14554 }%
14555 \unhbox\pdfm@box
14556 \HyField@AddToFields{reset}%
14557 \fi
14558 \endgroup
14559 }

```

\@CheckBox

```

14560 \def\@CheckBox[#1]#2{% parameters, label
14561 \def\Fld@name{#2}%
14562 \def\Fld@default{0}%
14563 \begingroup
14564 \def\Fld@width{\DefaultWidthofCheckBox}%
14565 \def\Fld@height{\DefaultHeightofCheckBox}%
14566 \expandafter\HyField@SetKeys\expandafter{%
14567 \DefaultOptionsofCheckBox,#1%
14568 }%
14569 \PDFForm@Name
14570 \HyField@FlagsCheckBox
14571 \ifFld@hidden\def\Fld@width{1sp}\fi
14572 \setbox\pdfm@box=\hbox{%
14573 \MakeCheckField{\Fld@width}{\Fld@height}%
14574 }%
14575 \HyField@AdvanceAnnotCount
14576 \LayoutCheckField{#2}{%
14577 \leavevmode
14578 \Hy@escapeform\PDFForm@Check
14579 \@pdfm@mark{%
14580 ann @check\HyField@TheAnnotCount\space
14581 \dvipdfm@setdim
14582 <<\PDFForm@Check>>%
14583 }%
14584 \unhbox\pdfm@box
14585 \HyField@AddToFields{check}%
14586 }%
14587 \endgroup
14588 }

14589 \def\Hy@FormObjects{%
14590 \@pdfm@mark{obj @OBJpdfdocencoding%
14591 <<%
14592 /Type/Encoding%
14593 /Differences[%
14594 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14595 39/quotesingle %
14596 96/grave %
14597 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14598 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14599 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14600 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14601 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14602 164/currency %
14603 166/brokenbar %

```

```

14604      168/dieresis/copyright/ordfeminine %
14605      172/logicalnot/.notdef/registered/macron/degree/plusminus%
14606      /twosuperior/threesuperior/acute/mu %
14607      183/periodcentered/cedilla/onesuperior/ordmasculine %
14608      188/onequarter/onehalf/threequarters %
14609      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14610      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14611      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14612      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14613      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14614      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14615      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14616      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14617      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14618      /thorn/ydieresis%
14619      ]%
14620      >>%
14621      }%
14622      \@pdfm@mark{obj @OBJZaDb%
14623      <<%
14624      /Type/Font%
14625      /Subtype/Type1%
14626      /Name/ZaDb%
14627      /BaseFont/ZapfDingbats%
14628      >>%
14629      }%
14630      \@pdfm@mark{obj @OBJHelv%
14631      <<%
14632      /Type/Font%
14633      /Subtype/Type1%
14634      /Name/Helv%
14635      /BaseFont/Helvetica%
14636      /Encoding @OBJpdfdocencoding%
14637      >>%
14638      }%
14639      \global\let\Hy@FormObjects\relax
14640      }
14641      </dvipdfm | xetex>

```

48.6 Common forms part

```
14642 (*pdfform)
```

\Fld@pageobjref

```
14643 \providecommand*{\Fld@pageobjref}{{}
```

\Hy@escapestring

```

14644 \begingroup\expandafter\expandafter\expandafter\endgroup
14645 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14646   \let\Hy@escapestring\@firstofone
14647   \def\Hy@escapeform#1{%
14648     \ifHy@pdfescapeform
14649       \def\Hy@escapestring##1{%
14650         \noexpand\Hy@escapestring{\noexpand##1}%
14651       }%
14652       \edef\Hy@temp{#1}%
14653       \expandafter\Hy@escapeform\Hy@temp\Hy@escapestring{}\@nil

```

```

14654 \def\Hy@escapestring##1{%
14655 \ifundefined{Hy@esc@\string##1}{%
14656 ##1%
14657 \ThisShouldNotHappen
14658 }{%
14659 \csname Hy@esc@\string##1\endcsname
14660 }%
14661 }%
14662 \else
14663 \let\Hy@escapestring\@firstofone
14664 \fi
14665 }%
14666 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14667 \ifx\#3\%
14668 \else
14669 \expandafter
14670 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14671 \ltx@ReturnAfterFi{%
14672 \Hy@@escapeform#3\@nil
14673 }%
14674 \fi
14675 }%
14676 \else
14677 \def\Hy@escapeform#1{%
14678 \ifHy@pdfescapeform
14679 \let\Hy@escapestring\pdfescapestring
14680 \else
14681 \let\Hy@escapestring\@firstofone
14682 \fi
14683 }%
14684 \Hy@escapeform{}%
14685 \fi

```

\PDFForm@Name

```

14686 \def\PDFForm@Name{%
14687 \PDFForm@@Name\Fld@name
14688 \ifx\Fld@altname\relax
14689 \else
14690 \PDFForm@@Name\Fld@altname
14691 \fi
14692 \ifx\Fld@mappingname\relax
14693 \else
14694 \PDFForm@@Name\Fld@mappingname
14695 \fi
14696 }

```

\PDFForm@@Name

```

14697 \def\PDFForm@@Name#1{%
14698 \begingroup
14699 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14700 \ifHy@unicode
14701 \Hy@unicodedefalse
14702 \fi
14703 \fi
14704 \HyPsd@XeTeXBigCharstrue
14705 \pdfstringdef\Hy@gtemp#1%
14706 \endgroup

```

```

14707 \let#1\Hy@gtemp
14708 }

```

\Fld@additionalactions

```

14709 \def\Fld@@additionalactions{%
K input (keystroke) format
14710 \ifx\Fld@keystroke@code\@empty
14711 \else
14712 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14713 \fi
F display format
14714 \ifx\Fld@format@code\@empty
14715 \else
14716 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14717 \fi
V validation
14718 \ifx\Fld@validate@code\@empty
14719 \else
14720 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14721 \fi
C calculation
14722 \ifx\Fld@calculate@code\@empty
14723 \else
14724 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14725 \fi
Fo receiving the input focus
14726 \ifx\Fld@onfocus@code\@empty
14727 \else
14728 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14729 \fi
Bl loosing the input focus (blurred)
14730 \ifx\Fld@onblur@code\@empty
14731 \else
14732 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14733 \fi
D pressing the mouse button (down)
14734 \ifx\Fld@onmousedown@code\@empty
14735 \else
14736 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14737 \fi
U releasing the mouse button (up)
14738 \ifx\Fld@onmouseup@code\@empty
14739 \else
14740 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14741 \fi
E cursor enters the annotation's active area.
14742 \ifx\Fld@onenter@code\@empty
14743 \else
14744 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14745 \fi

```

X cursor exits the annotation's active area.

```
14746 \ifx\Fld@onexit@code\@empty
14747 \else
14748 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14749 \fi
14750 }
14751 \def\Fld@additionalactions{%
14752 \if\Fld@@@additionalactions-%
14753 \else
14754 \ifHy@pdfa
14755 \else
14756 /AA<<\Fld@@additionalactions>>%
14757 \fi
14758 \fi
14759 }
```

\Fld@annotnames

```
14760 \def\Fld@annotnames{%
14761 /T(\Fld@name)%
14762 \ifx\Fld@altname\relax
14763 \else
14764 /TU(\Fld@altname)%
14765 \fi
14766 \ifx\Fld@mappingname\relax
14767 \else
14768 /TM(\Fld@mappingname)%
14769 \fi
14770 }
```

\PDFForm@Check

```
14771 \def\PDFForm@Check{%
14772 /Subtype/Widget%
14773 \Fld@annotflags
14774 \Fld@pageobjref
14775 \Fld@annotnames
14776 /FT/Btn%
14777 \Fld@flags
14778 /Q \Fld@align
14779 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14780 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14781 /MK<<%
14782 \ifnum\Fld@rotation=\z@
14783 \else
14784 /R \Fld@rotation
14785 \fi
14786 \ifx\Fld@bordercolor\relax
14787 \else
14788 /BC[\Fld@bordercolor]%
14789 \fi
14790 \ifx\Fld@bcolor\relax
14791 \else
14792 /BG[\Fld@bcolor]%
14793 \fi
14794 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14795 >>%
14796 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14797 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
```

```

14798 /H/P%
14799 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14800 \Fld@additionalactions
14801 }

```

\PDFForm@Push

```

14802 \ifHy@pdfa
14803 \else
14804 \def\PDFForm@Push{%
14805 /Subtype/Widget%
14806 \Fld@annotflags
14807 \Fld@pageobjref
14808 \Fld@annotnames
14809 /FT/Btn%
14810 \Fld@flags
14811 /H/P%
14812 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14813 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14814 \ifx\Fld@bordercolor\relax\else 1\fi
14815 \space
14816 \else
14817 /MK<<%
14818 \ifnum\Fld@rotation=\z@
14819 \else
14820 /R \Fld@rotation
14821 \fi
14822 \ifx\Fld@bordercolor\relax
14823 \else
14824 /BC[\Fld@bordercolor]%
14825 \fi
14826 >>%
14827 \fi
14828 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14829 \Fld@additionalactions
14830 }%
14831 \fi

```

\PDFForm@List

```

14832 \def\PDFForm@List{%
14833 /Subtype/Widget%
14834 \Fld@annotflags
14835 \Fld@pageobjref
14836 \Fld@annotnames
14837 /FT/Ch%
14838 \Fld@flags
14839 /Q \Fld@align
14840 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14841 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14842 \ifx\Fld@bordercolor\relax\else 1\fi
14843 \ifx\Fld@bcolor\relax \else 1\fi
14844 \space
14845 \else
14846 /MK<<%
14847 \ifnum\Fld@rotation=\z@
14848 \else
14849 /R \Fld@rotation
14850 \fi

```

```

14851     \ifx\Fld@bordercolor\relax
14852     \else
14853       /BC[\Fld@bordercolor]%
14854     \fi
14855     \ifx\Fld@bcolor\relax
14856     \else
14857       /BG[\Fld@bcolor]%
14858     \fi
14859     >>%
14860   \fi
14861   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14862     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14863   \Fld@choices
14864   \Fld@additionalactions
14865 }

```

\PDFForm@Radio

```

14866 \def\PDFForm@Radio{%
14867   /Subtype/Widget%
14868   \Fld@annotflags
14869   \Fld@pageobjref
14870   \Fld@annotnames
14871   /FT/Btn%
14872   \Fld@flags
14873   /H/P%
14874   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14875   /MK<<%
14876     \ifnum\Fld@rotation=\z@
14877     \else
14878       /R \Fld@rotation
14879     \fi
14880     \ifx\Fld@bordercolor\relax
14881     \else
14882       /BC[\Fld@bordercolor]%
14883     \fi
14884     \ifx\Fld@bcolor\relax
14885     \else
14886       /BG[\Fld@bcolor]%
14887     \fi
14888     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14889   >>%
14890   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14891     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14892   \ifx\Fld@default\@empty
14893     /V/Off%
14894     /DV/Off%
14895   \else
14896     /V/\Fld@default
14897     /DV/\Fld@default
14898   \fi
14899   \Fld@additionalactions
14900 }

```

\PDFForm@Text

```

14901 \def\PDFForm@Text{%
14902   /Subtype/Widget%

```

```

14903 \Fld@annotflags
14904 \Fld@pageobjref
14905 \Fld@annotnames
14906 /FT/Tx%
14907 \Fld@flags
14908 /Q \Fld@align
14909 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14910 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14911 \ifx\Fld@bordercolor\relax\else 1\fi
14912 \ifx\Fld@bcolor\relax \else 1\fi
14913 \space
14914 \else
14915 /MK<<%
14916 \ifnum\Fld@rotation=\z@
14917 \else
14918 /R \Fld@rotation
14919 \fi
14920 \ifx\Fld@bordercolor\relax
14921 \else
14922 /BC[\Fld@bordercolor]%
14923 \fi
14924 \ifx\Fld@bcolor\relax
14925 \else
14926 /BG[\Fld@bcolor]%
14927 \fi
14928 >>%
14929 \fi
14930 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14931 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14932 /DV(\Hy@escapestring{\Fld@default})%
14933 /V(\Hy@escapestring{\Fld@value})%
14934 \Fld@additionalactions
14935 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14936 }

```

\PDFForm@Submit

```

14937 \def\PDFForm@Submit{%
14938 /Subtype/Widget%
14939 \Fld@annotflags
14940 \Fld@pageobjref
14941 \Fld@annotnames
14942 /FT/Btn%
14943 \Fld@flags
14944 /H/P%
14945 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14946 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14947 \ifx\Fld@bordercolor\relax\else 1\fi
14948 \space
14949 \else
14950 /MK<<%
14951 \ifnum\Fld@rotation=\z@
14952 \else
14953 /R \Fld@rotation
14954 \fi
14955 \ifx\Fld@bordercolor\relax
14956 \else
14957 /BC[\Fld@bordercolor]%
14958 \fi

```

```

14959 >>%
14960 \fi
14961 /A<<%
14962 /S/SubmitForm%
14963 /F<<%
14964 /FS/URL%
14965 /F(\Hy@escapestring{\Form@action})%
14966 >>%
14967 \Fld@submitflags
14968 >>%
14969 \Fld@additionalactions
14970 }

```

\PDFForm@Reset

```

14971 \ifHy@pdfa
14972 \else
14973 \def\PDFForm@Reset{%
14974 /Subtype/Widget%
14975 \Fld@annotflags
14976 \Fld@pageobjref
14977 \Fld@annotnames
14978 /FT/Btn%
14979 \Fld@flags
14980 /H/P%
14981 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14982 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14983 \ifx\Fld@bordercolor\relax\else 1\fi
14984 \space
14985 \else
14986 /MK<<%
14987 \ifnum\Fld@rotation=\z@
14988 \else
14989 /R \Fld@rotation
14990 \fi
14991 \ifx\Fld@bordercolor\relax
14992 \else
14993 /BC[\Fld@bordercolor]%
14994 \fi
14995 % /CA (Clear)
14996 % /AC (Done)
14997 >>%
14998 \fi
14999 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15000 /A<</S/ResetForm>>%
15001 \Fld@additionalactions
15002 }%
15003 \fi

15004 </pdfform>
15005 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
15006 \def\phantomsection{%
15007   \Hy@MakeCurrentHrefAuto{section*}%
15008   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15009 }
15010 \</package>
```

49.1 Bookmarks

```
15011 \<*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.

```
15012 \def\Hy@writebookmark#1#2#3#4#5{%
15013   % section number, text, label, level, file
15014   \ifx\WriteBookmarks\relax%
15015   \else
15016     \ifnum#4>\Hy@bookmarksdepth\relax
15017     \else
15018       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15019     \fi
15020   \fi
15021 }
15022 \def\Hy@currentbookmarklevel{0}
15023 \def\Hy@numberline#1{#1 }
15024 \def\@@writetorep#1#2#3#4#5{%
15025   \begingroup
15026     \edef\Hy@tempa{#5}%
15027     \ifx\Hy@tempa\Hy@bookmarkstype
15028       \edef\Hy@level{#4}%
15029       \ifx\Hy@levelcheck Y%
15030         \@tempcnta\Hy@level\relax
15031         \advance\@tempcnta by -1 %
15032         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15033           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15034           \advance\@tempcnta by 1 %
15035           \Hy@Warning{%
15036             Difference (\the\@tempcnta) between bookmark levels is %
```

```

15037         greater \MessageBreak than one, level fixed%
15038     }%
15039     \@tempcnta\Hy@currentbookmarklevel
15040     \advance\@tempcnta by 1 %
15041     \edef\Hy@level{\the\@tempcnta}%
15042     \fi
15043     \else
15044         \global\let\Hy@levelcheck Y%
15045     \fi
15046     \global\let\Hy@currentbookmarklevel\Hy@level
15047     \@tempcnta\Hy@level\relax
15048     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15049     \advance\@tempcnta by -1 %
15050     \edef\Hy@tempa{#3}%
15051     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15052     \ifx\Hy@tempa\Hy@tempb
15053         \Hy@Warning{%
15054             The anchor of a bookmark and its parent's must not%
15055             \MessageBreak be the same. Added a new anchor%
15056         }%
15057         \phantomsection
15058     \fi
15059     \ifHy@bookmarksnumbered
15060         \let\numberline\Hy@numberline
15061         \let\booknumberline\Hy@numberline
15062         \let\partnumberline\Hy@numberline
15063         \let\chapternumberline\Hy@numberline
15064     \else
15065         \let\numberline\@gobble
15066         \let\booknumberline\@gobble
15067         \let\partnumberline\@gobble
15068         \let\chapternumberline\@gobble
15069     \fi
15070     \HyPsd@XeTeXBigCharstrue
15071     \pdfstringdef\Hy@tempa{#2}%
15072     \HyPsd@SanitizeForOutFile\Hy@tempa
15073     \if@filesw
15074         \stepcounter{bookmark@seq@number}%
15075         \@ifundefined{@outlinefile}{%
15076             {%
15077                 \protected@write\@outlinefile{}{%
15078                     \protect\BOOKMARK
15079                     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15080                     {\Hy@tempa}{\Hy@tempb}%
15081                     \@percentchar\space\thebookmark@seq@number
15082                 }%
15083             }%
15084         \fi
15085     \fi
15086 \endgroup
15087 }
15088 \newcounter{bookmark@seq@number}
15089 \begingroup
15090 \lccode'('= '{%
15091 \lccode'='='}%
15092 \lccode'1=\z@
15093 \lccode'2=\z@

```

```

15094 \lccode'3=\z@
15095 \lccode'5=\z@
15096 \lccode'7=\z@
15097 \lccode'\#=\z@
15098 \lccode'\'=\z@
15099 \lccode'\{=\z@
15100 \lccode'\}=\z@
15101 \lowercase{%
15102 \endgroup
15103 \def\HyPsd@SanitizeForOutFile#1{%
15104   \@onelevel@sanitize\Hy@tempa
15105   \escapechar'\%
15106   \edef\Hy@tempa{%
15107     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
15108   }%
15109   \edef\Hy@tempa{%
15110     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
15111   }%
15112 }%
15113 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15114   #1%
15115   \ifx\#2\%
15116     \expandafter\ltx@gobble
15117   \else
15118     \expandafter\ltx@firstofone
15119   \fi
15120   {%
15121     \string\173%
15122     \HyPsd@SanitizeOut@BraceLeft#2\@nil
15123   }%
15124 }%
15125 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15126   #1%
15127   \ifx\#2\%
15128     \expandafter\ltx@gobble
15129   \else
15130     \expandafter\ltx@firstofone
15131   \fi
15132   {%
15133     \string\175%
15134     \HyPsd@SanitizeOut@BraceRight#2\@nil
15135   }%
15136 }%
15137 }

```

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

```

15138 \newcommand{\currentpdfbookmark}{%
15139   \pdfbookmark[\Hy@currentbookmarklevel]%
15140 }
15141 \newcommand{\subpdfbookmark}{%
15142   \@tempcnta\Hy@currentbookmarklevel
15143   \Hy@StepCount\@tempcnta
15144   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15145 }
15146 \newcommand{\belowpdfbookmark}[2]{%
15147   \@tempcnta\Hy@currentbookmarklevel
15148   \Hy@StepCount\@tempcnta

```

```

15149 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15150 \advance\@tempcnta by -1 %
15151 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15152 }

```

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.

```

15153 \renewcommand\pdfbookmark[3][0]{%
15154   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15155   \hyper@anchorstart{#3.#1}\hyper@anchorend
15156 }
15157 \def\BOOKMARK{%
15158   \ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15159 }
15160 \def\@BOOKMARK[#1]{%
15161   \ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15162 }

```

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`

```

15163 \RequirePackage{rerunfilecheck}[2009/12/10]
15164 \def\Hy@OutlineRerunCheck{%
15165   \RerunFileCheck{\jobname.out}{%
15166     \immediate\closeout\@outlinefile
15167   }{%
15168     Rerun to get outlines right\MessageBreak
15169     or use package ‘bookmark’%
15170   }%
15171 }

```

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.

```

15172 <*vtex>
15173 \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.

```

15174 \begingroup
15175 \catcode'\=12 %
15176 \ifnum\Hy@VTeXversion<650 %
15177   \catcode'\=12 %
15178   \gdef\hv@pdf@char#1#2#3{%
15179     \char
15180     \ifcase'#1#2#3 %
15181       "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15182       \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15183       \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

```

```

15184 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15185 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15186 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15187 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15188 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15189 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15190 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15191 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15192 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15193 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15194 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15195 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15196 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15197 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15198 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15199 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15200 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15201 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15202 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15203 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15204 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15205 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15206 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15207 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15208 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15209 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15210 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15211 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15212 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15213 \fi
15214 }%
15215 \else
15216 \gdef\hv@pdf@char{\char'}%
15217 \fi
15218 \endgroup

```

\@@BOOKMARK

```

15219 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15220 \expandafter\edef\csname @count@#3\endcsname{%
15221 \the\@serial@counter
15222 }%
15223 \edef\@mycount{\the\@serial@counter}%
15224 \Hy@StepCount\@serial@counter
15225 \edef\@parcount{%
15226 \expandafter\ifx\csname @count@#5\endcsname\relax
15227 0%
15228 \else
15229 \csname @count@#5\endcsname
15230 \fi
15231 }%
15232 \immediate\special{%
15233 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15234 s=\ifx#2-c\else o\fi,t=#4%
15235 }%
15236 }%

```

\ReadBookmarks

```

15237 \def\ReadBookmarks{%
15238   \begingroup
15239   \def\0{\hv@pdf@char 0}%
15240   \def\1{\hv@pdf@char 1}%
15241   \def\2{\hv@pdf@char 2}%
15242   \def\3{\hv@pdf@char 3}%
15243   \def\({}%
15244   \def\)}%
15245   \def\do##1{%
15246     \ifnum\catcode'##1=\active
15247       \@makeother##1%
15248     \else
15249       \ifnum\catcode'##1=6 %
15250         \@makeother##1%
15251       \fi
15252     \fi
15253   }%
15254   \dospecials
15255   \Hy@safe@activetrue
15256   \InputIfFileExists{\jobname.out}{-}{-}%
15257 \endgroup
15258 \ifx\WriteBookmarks\relax
15259 \else
15260   \if@filesw
15261     \newwrite\@outlinefile
15262     \Hy@OutlineRerunCheck
15263     \immediate\openout\@outlinefile=\jobname.out\relax
15264     \ifHy@typexml
15265       \immediate\write\@outlinefile{<relaxxml>\relax}%
15266     \fi
15267   \fi
15268 \fi
15269 }

15270 </vtex>
15271 (*!vtex)
15272 \def\ReadBookmarks{%
15273   \pdf@ifdraftmode{-}{-}%
15274   \begingroup
15275     \def\do##1{%
15276       \ifnum\catcode'##1=\active
15277         \@makeother##1%
15278       \else
15279         \ifnum\catcode'##1=6 %
15280           \@makeother##1%
15281         \fi
15282       \fi
15283     }%
15284     \dospecials
15285     \Hy@safe@activetrue
15286     \escapechar='\'%
15287     \def\@@BOOKMARK[##1][##2]##3##4##5{%
15288       \calc@bm@number{##5}%
15289     }%
15290     \InputIfFileExists{\jobname.out}{-}{-}%
15291     \ifx\WriteBookmarks\relax
15292       \global\let\WriteBookmarks\relax
15293     \fi

```

```

15294 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15295 \def\Hy@temp{##4}%
15296 (*pdfTeX)
15297 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15298 \Hy@OutlineName{}\Hy@pstringName{%
15299 ##2\check@bm@number{##3}%
15300 }{%
15301 \expandafter\strip@prefix\meaning\Hy@temp
15302 }%
15303 </pdfTeX>
15304 (*pdfmark)
15305 \pdfmark{%
15306 pdfmark=/OUT,%
15307 Count={##2\check@bm@number{##3}},%
15308 Dest={##3},%
15309 Title=\expandafter\strip@prefix\meaning\Hy@temp
15310 }%
15311 </pdfmark>
15312 (*dvipdfm|xetex)
15313 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15314 \@pdfm@mark{%
15315 outline \ifHy@DvipdfmxOutlineOpen
15316 [%
15317 \ifnum##21>\z@
15318 \else
15319 -%
15320 \fi
15321 ]%
15322 \fi
15323 ##1<<%
15324 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15325 /A<<%
15326 /S/GoTo%
15327 /D(\Hy@pstringName)%
15328 >>%
15329 >>%
15330 }%
15331 </dvipdfm|xetex>
15332 }%
15333 \begingroup
15334 \def\WriteBookmarks{0}%
15335 \InputIfFileExists{jobname.out}{-}{-}%
15336 \endgroup
15337 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
15338 \endgroup
15339 }%
15340 \ifx\WriteBookmarks\relax
15341 \else
15342 \if@files
15343 \newwrite\@outlinefile
15344 \Hy@OutlineRerunCheck
15345 \immediate\openout\@outlinefile=jobname.out\relax
15346 \ifHy@typexml
15347 \immediate\write\@outlinefile{<relaxxml>\relax}%
15348 \fi
15349 \fi
15350 \fi

```

```

15351 }
15352 \<*pdfTeX>
15353 \def\Hy@OutlineName#1#2#3#4{%
15354   \pdfoutline goto name{#2}count#3{#4}%
15355 }
15356 \</pdfTeX>
15357 \def\check@bm@number#1{%
15358   \expandafter\ifx\csname B_#1\endcsname\relax
15359     0%
15360   \else
15361     \csname B_#1\endcsname
15362   \fi
15363 }
15364 \def\calc@bm@number#1{%
15365   \@tempcnta=\check@bm@number{#1}\relax
15366   \advance\@tempcnta by 1 %
15367   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15368 }
15369 \</!vTeX>

15370 \ifHy@implicit
15371 \else
15372   \expandafter\endinput
15373 \fi

15374 \</outlines>
15375 \<*outlines | hypertex>

15376 \newlength\Hy@SectionHShift
15377 \def\Hy@SectionAnchorHref#1{%
15378   \ifx\protect\@typeset@protect
15379     \Hy@@SectionAnchor{#1}%
15380   \fi
15381 }
15382 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
15383   \leavevmode
15384   \hbox to 0pt{%
15385     \kern-\Hy@SectionHShift
15386     \Hy@raisedlink{%
15387       \hyper@anchorstart{#1}\hyper@anchorend
15388     }%
15389     \hss
15390   }%
15391 }
15392 \let\H@old@ssect\@ssect
15393 \def\@ssect#1#2#3#4#5{%
15394   \Hy@MakeCurrentHrefAuto{section*}%
15395   \setlength{\Hy@SectionHShift}{#1}%
15396   \begingroup
15397     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15398     \toks\tw@\expandafter{%
15399       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15400       #5%
15401     }%
15402   \edef\x{\endgroup
15403     \the\toks@\the\toks\tw@}%
15404   }\x
15405 }
15406 \let\H@old@schapter\@schapter

```

```

15407 \def\@schapter#1{%
15408   \begingroup
15409     \let\@mkboth\@gobbletwo
15410     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15411     \Hy@raisedlink{%
15412       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15413     }%
15414   \endgroup
15415   \H@old@chapter{#1}%
15416 }

```

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:

```

15417 \ltx@ifundefined{@chapter}{}{}%
15418 \let\Hy@org@chapter\@chapter
15419 \def\@chapter{%
15420   \def\Hy@next{%
15421     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15422     \Hy@raisedlink{%
15423       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15424     }%
15425   }%
15426   \ifnum\c@secnumdepth>\m@ne
15427     \ltx@ifundefined{if@mainmatter}%
15428     \iftrue{\csname if@mainmatter\endcsname}%
15429     \let\Hy@next\relax
15430   \fi
15431   \fi
15432   \Hy@next
15433   \Hy@org@chapter
15434 }%
15435 }

15436 \let\H@old@part\@part
15437 \begingroup\expandafter\expandafter\expandafter\endgroup
15438 \expandafter\ifx\csname chapter\endcsname\relax
15439   \let\Hy@secnum@part\z@
15440 \else
15441   \let\Hy@secnum@part\m@ne
15442 \fi
15443 \def\@part{%
15444   \ifnum\Hy@secnum@part>\c@secnumdepth
15445     \phantomsection
15446   \fi
15447   \H@old@part
15448 }

15449 \let\H@old@spart\@spart
15450 \def\@spart#1{%
15451   \Hy@MakeCurrentHrefAuto{part*}%
15452   \Hy@raisedlink{%
15453     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15454   }%
15455   \H@old@spart{#1}%
15456 }

15457 \let\H@old@sect\@sect
15458 \def\@sect#1#2#3#4#5#6[#7]#8{%
15459   \ifnum #2>\c@secnumdepth

```

```

15460 \expandafter\@firstoftwo
15461 \else
15462 \expandafter\@secondoftwo
15463 \fi
15464 {%
15465 \Hy@MakeCurrentHrefAuto{section*}%
15466 \setlength{\Hy@SectionHShift}{#3}%
15467 \begingroup
15468 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}}%
15469 \toks\tw@\expandafter{%
15470 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15471 #8%
15472 }%
15473 \edef\x{\endgroup
15474 \the\toks@\the\toks\tw@}%
15475 }\x
15476 }{%
15477 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}{{#8}}%
15478 }%
15479 }

15480 </outlines | hypertex>
15481 <*outlines>

15482 \expandafter\def\csname Parent-4\endcsname{}
15483 \expandafter\def\csname Parent-3\endcsname{}
15484 \expandafter\def\csname Parent-2\endcsname{}
15485 \expandafter\def\csname Parent-1\endcsname{}
15486 \expandafter\def\csname Parent0\endcsname{}
15487 \expandafter\def\csname Parent1\endcsname{}
15488 \expandafter\def\csname Parent2\endcsname{}
15489 \expandafter\def\csname Parent3\endcsname{}
15490 \expandafter\def\csname Parent4\endcsname{}
15491 </outlines>

```

50 Compatibility with koma-script classes

```
15492 <*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.

```

15493 \def\Hy@tempa{%
15494 \def\@addchap[##1]##2{%
15495 \typeout{##2}%
15496 \if@twoside
15497 \@mkboth{##1}{}%
15498 \else
15499 \@mkboth{}{##1}%
15500 \fi
15501 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15502 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15503 \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
15504 \Hy@raisedlink{%
15505 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15506 }%
15507 \if@twocolumn

```

```

15508 \topnewpage[\@makeschapterhead{##2}]%
15509 \else
15510 \@makeschapterhead{##2}%
15511 \afterheading
15512 \fi
15513 \addcontentsline{toc}{chapter}{##1}%
15514 }%
15515 }
15516 \@ifclassloaded{scrbook}{%
15517 \@ifclasslater{scrbook}{2001/01/01}{%
15518 \let\Hy@tempa\@empty
15519 }{}%
15520 }{%
15521 \@ifclassloaded{scrreprt}{%
15522 \@ifclasslater{scrreprt}{2001/01/01}{%
15523 \let\Hy@tempa\@empty
15524 }{}%
15525 }{%
15526 \let\Hy@tempa\@empty
15527 }%
15528 }%
15529 \Hy@tempa
15530 </outlines | hypertext>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15531 <*pd1enc>
15532 \DeclareFontEncoding{PD1}{}{}

Accents
15533 \DeclareTextAccent{'}{PD1}{\textasciigrave}
15534 \DeclareTextAccent{'}{PD1}{\textacute}
15535 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15536 \DeclareTextAccent{~}{PD1}{\texttilde}
15537 \DeclareTextAccent{¨}{PD1}{\textasciidieresis}
15538 \DeclareTextAccent{r}{PD1}{\textstring}
15539 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15540 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15541 \DeclareTextAccent{c}{PD1}{\textcedilla}
15542 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15543 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15544 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15545 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
15546 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
15547 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
15548 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
15549 \DeclareTextCompositeCommand{¨}{PD1}{\@empty}{\textasciidieresis}
15550 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textstring}
15551 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
15552 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
15553 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
15554 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}

```

```

15555 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15556 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15557 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
15558 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textacute}
15559 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
15560 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15561 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15562 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15563 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15564 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15565 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15566 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15567 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15568 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15569 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15570 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15571 \DeclareTextCommand{\newtie}{PD1}[1]{%
15572   \TextSymbolUnavailable{\newtie{#1}}#1%
15573 }

```

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

```

15574 % U+0009 (CHARACTER TABULATION)
15575 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15576 % U+000A (LINE FEED)
15577 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15578 % U+000D (CARRIAGE RETURN)
15579 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15580 % U+02D8 BREVE; breve
15581 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15582 % U+02C7 CARON; caron
15583 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15584 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15585 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15586 % U+02D9 DOT ABOVE; dotaccent
15587 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15588 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15589 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15590 % U+02DB OGONEK; ogonek
15591 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15592 % U+02DA RING ABOVE; ring
15593 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15594 % U+02DC SMALL TILDE; ilde, *tilde
15595 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

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

\041: U+0021 EXCLAMATION MARK; exclam

```

15596 % U+0022 QUOTATION MARK; quotedbl
15597 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15598 % U+0023 NUMBER SIGN; numbersign
15599 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15600 % U+0024 DOLLAR SIGN; dollar
15601 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15602 % U+0025 PERCENT SIGN; percent
15603 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15604 % U+0026 AMPERSAND; ampersand
15605 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

 15606 % U+0028 LEFT PARENTHESIS; parenleft
 15607 \DeclareTextCommand{\textparenleft}{PD1}{\string\}% \050 U+0028
 15608 % U+0029 RIGHT PARENTHESIS; parenright
 15609 \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
 15610 % U+002E FULL STOP; period
 15611 \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
 15612 % U+003C LESS-THAN SIGN; less
 15613 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

 \075: U+003D EQUALS SIGN; equal
 15614 % U+003E GREATER-THAN SIGN; greater
 15615 \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
 15616 % U+005C REVERSE SOLIDUS; backslash
 15617 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15618 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15619 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}

 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15620 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15621 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15622 % U+005F LOW LINE; underscore
 15623 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15624 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15625 % U+0060 GRAVE ACCENT; grave
 15626 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060

 \141: U+0061 LATIN SMALL LETTER A; a

 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15627 % U+0069 LATIN SMALL LETTER I; i
 15628 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

 \152: U+006A LATIN SMALL LETTER J; j

 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15629 % U+007B LEFT CURLY BRACKET; braceleft
 15630 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15631 % U+007C VERTICAL LINE; *bar, verticalbar

15632 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15633 % U+007D RIGHT CURLY BRACKET; braceright
 15634 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15635 % U+007E TILDE; asciitilde
 15636 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15637 % U+2022 BULLET; bullet
 15638 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15639 % U+2020 DAGGER; dagger
 15640 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15641 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15642 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15643 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15644 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15645 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15646 % U+2014 EM DASH; emdash
 15647 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15648 % U+2013 EN DASH; endash
 15649 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15650 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15651 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15652 % U+2044 FRACTION SLASH; fraction
 15653 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15654 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15655 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15656 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singright
 15657 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 15658 % U+2212 MINUS SIGN; minus
 15659 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15660 % U+2030 PER MILLE SIGN; perthousand
 15661 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15662 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15663 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15664 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15665 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15666 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15667 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15668 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15669 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15670 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15671 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15672 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15673 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15674 % U+2122 TRADE MARK SIGN; trademark
 15675 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15676 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15677 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15678 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15679 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15680 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15681 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15682 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15683 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15684 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15685 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160

15686 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15687 \DeclareTextCompositeCommand{"Y}{PD1}{Y}{\230}% U+0178
 15688 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15689 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15690 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15691 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15692 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15693 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15694 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15695 % U+0153 LATIN SMALL LIGATURE OE; oe
 15696 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15697 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15698 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15699 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15700 \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.
 15701 % U+20AC EURO SIGN; *Euro, euro
 15702 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15703 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15704 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15705 % U+00A2 CENT SIGN; cent
 15706 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15707 % U+00A3 POUND SIGN; sterling
 15708 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15709 % U+00A4 CURRENCY SIGN; currency
 15710 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15711 % U+00A5 YEN SIGN; yen
 15712 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15713 % U+00A6 BROKEN BAR; brokenbar
 15714 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15715 % U+00A7 SECTION SIGN; section
 15716 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15717 % U+00A8 DIAERESIS; dieresis
 15718 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15719 % U+00A9 COPYRIGHT SIGN; copyright
 15720 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15721 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15722 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15723 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15724 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15725 % U+00AC NOT SIGN; logicalnot
 15726 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15727 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15728 % U+00AE REGISTERED SIGN; registered
 15729 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15730 % U+00AF MACRON; *macron, overscore
 15731 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15732 % U+00B0 DEGREE SIGN; degree
 15733 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15734 % U+00B1 PLUS-MINUS SIGN; plusminus
 15735 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15736 % U+00B2 SUPERSCRIPT TWO; twosuperior
 15737 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15738 % U+00B3 SUPERSCRIPT THREE; threesuperior

15739 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15740 % U+00B4 ACUTE ACCENT; acute
15741 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15742 % U+00B5 MICRO SIGN; mu, mul
15743 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15744 % U+00B6 PILCROW SIGN; paragraph
15745 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15746 % U+00B7 MIDDLE DOT; middot, *periodcentered
15747 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15748 % U+00B8 CEDILLA; cedilla
15749 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15750 % U+00B9 SUPERSCRIPT ONE; onesuperior
15751 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15752 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15753 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15754 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15755 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15756 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15757 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15758 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15759 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15760 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15761 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15762 % U+00BF INVERTED QUESTION MARK; questiondown
15763 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15764 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15765 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15766 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15767 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15768 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15769 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15770 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15771 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15772 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15773 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
15774 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15775 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15776 % U+00C6 LATIN CAPITAL LETTER AE; AE
15777 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15778 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15779 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15780 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15781 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15782 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15783 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15784 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15785 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15786 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15787 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
15788 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15789 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15790 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15791 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15792 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15793 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15794 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis

15795 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15796 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15797 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15798 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15799 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15800 \DeclareTextCompositeCommand{~}{PD1}{N}{\321}% U+00D1
15801 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15802 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
15803 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15804 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
15805 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15806 \DeclareTextCompositeCommand{^}{PD1}{O}{\324}% U+00D4
15807 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15808 \DeclareTextCompositeCommand{~}{PD1}{O}{\325}% U+00D5
15809 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15810 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15811 % U+00D7 MULTIPLICATION SIGN; multiply
15812 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15813 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15814 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15815 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15816 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
15817 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15818 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
15819 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15820 \DeclareTextCompositeCommand{^}{PD1}{U}{\333}% U+00DB
15821 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15822 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15823 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15824 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
15825 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15826 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15827 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15828 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15829 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15830 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15831 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
15832 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15833 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
15834 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15835 \DeclareTextCompositeCommand{^}{PD1}{a}{\342}% U+00E2
15836 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15837 \DeclareTextCompositeCommand{~}{PD1}{a}{\343}% U+00E3
15838 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15839 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15840 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15841 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15842 % U+00E6 LATIN SMALL LETTER AE; ae
15843 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15844 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15845 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15846 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15847 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
15848 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15849 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
15850 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15851 \DeclareTextCompositeCommand{^}{PD1}{e}{\352}% U+00EA

15852 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15853 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
15854 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15855 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
15856 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
15857 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15858 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
15859 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
15860 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15861 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
15862 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
15863 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15864 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
15865 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
15866 % U+00F0 LATIN SMALL LETTER ETH; eth
15867 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15868 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15869 \DeclareTextCompositeCommand{"}{PD1}{n}{\361}% U+00F1
15870 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15871 \DeclareTextCompositeCommand{"}{PD1}{o}{\362}% U+00F2
15872 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15873 \DeclareTextCompositeCommand{"}{PD1}{o}{\363}% U+00F3
15874 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15875 \DeclareTextCompositeCommand{"}{PD1}{o}{\364}% U+00F4
15876 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otile
15877 \DeclareTextCompositeCommand{"}{PD1}{o}{\365}% U+00F5
15878 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15879 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
15880 % U+00F7 DIVISION SIGN; divide
15881 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15882 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15883 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15884 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15885 \DeclareTextCompositeCommand{"}{PD1}{u}{\371}% U+00F9
15886 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15887 \DeclareTextCompositeCommand{"}{PD1}{u}{\372}% U+00FA
15888 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15889 \DeclareTextCompositeCommand{"}{PD1}{u}{\373}% U+00FB
15890 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15891 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
15892 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15893 \DeclareTextCompositeCommand{"}{PD1}{y}{\375}% U+00FD
15894 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15895 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15896 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15897 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15898 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15899 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
15900 \DeclareTextCommand{\SS}{PD1}{SS}%
15901 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)
15902 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15903 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15904 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15905 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15906 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%

```

15907 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15908 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15909 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

Aliases (math names)
15910 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15911 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15912 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15913 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15914 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15915 \DeclareTextCommand{\textbeta}{PD1}{\ss}%

```

Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@immt.pwr.wroc.pl).

```

15916 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15917 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15918 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15919 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15920 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15921 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15922 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot

15923 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15924 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15925 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15926 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15927 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15928 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15929 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

15930 </pd1enc>

```

51.2 PU encoding

```

15931 <*puenc>
15932 \DeclareFontEncoding{PU}{-}{-}

```

51.2.1 NFSS2 accents

```

15933 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15934 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15935 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15936 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15937 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15938 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15939 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15940 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15941 % U+0304 COMBINING MACRON; macroncmb
15942 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15943 % U+0306 COMBINING BREVE; brevecmb
15944 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15945 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15946 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15947 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15948 % U+0308 COMBINING DIAERESIS; dieresiscmb
15949 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15950 % U+030A COMBINING RING ABOVE; ringcmb
15951 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15952 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15953 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15954 % U+030C COMBINING CARON; caroncmb

```

```

15955 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15956 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15957 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15958 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15959 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15960 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15961 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15962 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15963 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15964 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15965 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15966 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15967 % U+0327 COMBINING CEDILLA; cedillacmb
15968 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15969 % U+0328 COMBINING OGONEK; ogonekcmb
15970 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15971 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15972 % \textsubcircum (tipa)
15973 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15974 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15975 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15976 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15977 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15978 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15979 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15980 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15981 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15982 % U+20DD COMBINING ENCLOSING CIRCLE
15983 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15984 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15985 \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.

```

15986 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}%
15987 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textacute}%
15988 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15989 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15990 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15991 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textstring}%
15992 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15993 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15994 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15995 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15996 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15997 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15998 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15999 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16000 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{ \83\021\}}% U+0311
16001 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{ \83\044\}}% U+0324
16002 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textsubringlow}%
16003 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
    low}%
16004 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{ \83\056\}}% U+032E
16005 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\textsubtilde}%

```

```

16006 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16007 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16008 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16009 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16010 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16011 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16012 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16013 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}%
16014 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textacute}%
16015 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16016 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16017 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16018 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16019 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16020 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16021 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16022 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16023 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16024 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16025 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16026 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16027 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16028 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16029 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16030 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
16031 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16032 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16033 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16034 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16035 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16036 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16037 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16038 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16039 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

16040 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16041 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16042 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16043 \DeclareTextCommand{\capitalacute}{PU}[1]{\`{#1}}%
16044 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16045 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16046 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"}{#1}}%
16047 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16048 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16049 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16050 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16051 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16052 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16053 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16054 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

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

Special white space escape characters.

```

16055 % U+0009 (CHARACTER TABULATION)
16056 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16057 % U+000A (LINE FEED)

```

16058 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16059 % U+000D (CARRIAGE RETURN)
16060 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16061 % U+0022 QUOTATION MARK; quotedbl
16062 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16063 % U+0023 NUMBER SIGN; numbersign
16064 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16065 % U+0024 DOLLAR SIGN; dollar
16066 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16067 %* \textdollar -> \mathdollar
16068 %* \textdollar -> \EyesDollar (marvosym)
16069 % U+0025 PERCENT SIGN; percent
16070 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16071 % U+0026 AMPERSAND; ampersand
16072 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16073 %* \textampersand -> \binampersand (stmaryrd)
16074 %* \textampersand -> \with (cml)
16075 % U+0027 APOSTROPHE; quotesingle
16076 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16077 % U+0028 LEFT PARENTHESIS; parenleft
16078 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16079 % U+0029 RIGHT PARENTHESIS; parenright
16080 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16081 % U+002A ASTERISK; asterisk; (?)
16082 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16083 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16084 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16085 % U+002C COMMA; comma; \MVComma (marvosym)
16086 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16087 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16088 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16089 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16090 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16091 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16092 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16093 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16094 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16095 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16096 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16097 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16098 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16099 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16100 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16101 % U+0034 DIGIT FOUR; four; \MVFfour (marvosym)
16102 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
16103 % U+0035 DIGIT FIVE; five; \MVFfive (marvosym)
16104 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
16105 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16106 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
16107 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16108 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16109 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16110 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16111 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16112 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

$\backslash 80\backslash 072$: U+003A COLON; colon
 $\backslash 80\backslash 073$: U+003B SEMICOLON; semicolon
16113 % U+003C LESS-THAN SIGN; less
16114 $\backslash \text{DeclareTextCommand}\{\backslash \text{textless}\}\{\text{PU}\}\{<\}\%$ $\backslash 80\backslash 074$ U+003C
 $\backslash 80\backslash 075$: U+003D EQUALS SIGN; equal
16115 % U+003E GREATER-THAN SIGN; greater
16116 $\backslash \text{DeclareTextCommand}\{\backslash \text{textgreater}\}\{\text{PU}\}\{>\}\%$ $\backslash 80\backslash 076$ U+003E
 $\backslash 80\backslash 077$: U+003F QUESTION MARK; question
16117 % U+0040 COMMERCIAL AT; at; $\backslash \text{MVAt}$ (marvosym)
16118 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVAt}\}\{\text{PU}\}\{\backslash 80\backslash 100\}\%*$ 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
16119 % U+005C REVERSE SOLIDUS; backslash
16120 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
16121 % U+005E CIRCUMFLEX ACCENT; asciicircum
16122 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
16123 % U+005F LOW LINE; underscore
16124 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
16125 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
16126 % U+0060 GRAVE ACCENT; grave
16127 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
16128 % U+0069 LATIN SMALL LETTER I; i
16129 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
16130 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
16131 % U+007B LEFT CURLY BRACKET; braceleft
16132 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
16133 % U+007C VERTICAL LINE; *bar, verticalbar
16134 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{|}\}\%$ $\backslash 80\backslash 174$ U+007C
16135 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvbar}$ (tipa)
16136 % U+007D RIGHT CURLY BRACKET; braceright
16137 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
16138 % U+007E TILDE; asciitilde
16139 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
16140 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
16141 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
16142 % U+00A2 CENT SIGN; cent
16143 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
16144 % U+00A3 POUND SIGN; sterling
16145 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
16146 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)

16147 %* \textsterling -> \pounds (LaTeX)
 16148 % U+00A4 CURRENCY SIGN; currency
 16149 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 16150 % U+00A5 YEN SIGN; yen
 16151 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 16152 % U+00A6 BROKEN BAR; brokenbar
 16153 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 16154 %* \textbrokenbar -> \brokenvert (wasysym)
 16155 % U+00A7 SECTION SIGN; section
 16156 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 16157 %* \textsection -> \mathsection (LaTeX)
 16158 %* \textsection -> \S (LaTeX)
 16159 % U+00A8 DIAERESIS; dieresis
 16160 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 16161 % U+00A9 COPYRIGHT SIGN; copyright
 16162 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 16163 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16164 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 16165 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16166 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 16167 % U+00AC NOT SIGN; logicalnot
 16168 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 16169 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16170 % U+00AE REGISTERED SIGN; registered
 16171 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 16172 % U+00AF MACRON; *macron, overscore
 16173 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 16174 % U+00B0 DEGREE SIGN; degree
 16175 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 16176 % U+00B1 PLUS-MINUS SIGN; plusminus
 16177 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 16178 % U+00B2 SUPERSCRIPT TWO; twosuperior
 16179 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 16180 % U+00B3 SUPERSCRIPT THREE; threesuperior
 16181 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 16182 % U+00B4 ACUTE ACCENT; acute
 16183 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 16184 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 16185 % U+00B5 MICRO SIGN; mu, mu1
 16186 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 16187 % U+00B6 PILCROW SIGN; paragraph
 16188 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 16189 %* \textparagraph -> \mathparagraph (LaTeX)
 16190 % U+00B7 MIDDLE DOT; middot, *periodcentered
 16191 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 16192 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 16193 %* \textperiodcentered -> \Squaredot (marvosym)
 16194 % U+00B8 CEDILLA; cedilla
 16195 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 16196 % U+00B9 SUPERSCRIPT ONE; onesuperior
 16197 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 16198 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 16199 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 16200 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright

16201 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16202 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16203 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16204 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16205 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16206 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16207 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16208 % U+00BF INVERTED QUESTION MARK; questiondown
16209 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16210 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16211 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16212 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16213 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16214 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16215 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16216 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16217 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16218 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16219 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16220 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16221 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16222 % U+00C6 LATIN CAPITAL LETTER AE; AE
16223 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16224 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16225 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16226 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16227 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16228 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16229 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16230 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16231 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16232 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16233 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16234 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16235 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16236 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16237 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16238 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16239 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16240 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16241 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16242 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16243 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16244 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16245 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16246 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16247 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16248 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16249 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16250 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16251 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
16252 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16253 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16254 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16255 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16256 % U+00D7 MULTIPLICATION SIGN; multiply
16257 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7

16258 %* \textmultiply -> \vartimes (stmaryrd)
16259 %* \textmultiply -> \MVMultiplication (marvosym)
16260 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16261 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16262 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16263 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
16264 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16265 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16266 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16267 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16268 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16269 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16270 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16271 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16272 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16273 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16274 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16275 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16276 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16277 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16278 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
16279 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16280 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16281 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16282 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16283 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16284 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16285 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16286 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16287 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16288 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16289 % U+00E6 LATIN SMALL LETTER AE; ae
16290 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16291 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16292 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16293 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16294 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
16295 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16296 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16297 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16298 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16299 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16300 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16301 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16302 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16303 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16304 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16305 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16306 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16307 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16308 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16309 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16310 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16311 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16312 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16313 % U+00F0 LATIN SMALL LETTER ETH; eth
16314 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0

16315 %* \dh -> \eth (wsuipa, phonetic)
 16316 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 16317 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 16318 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 16319 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 16320 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16321 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 16322 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16323 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 16324 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16325 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 16326 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16327 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16328 % U+00F7 DIVISION SIGN; divide
 16329 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16330 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16331 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16332 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16333 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16334 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16335 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16336 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16337 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16338 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16339 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16340 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16341 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16342 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16343 % \th, \thorn (wasysym), \textthorn (tipa)
 16344 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16345 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16346 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16347 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16348 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16349 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16350 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16351 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16352 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16353 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16354 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16355 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16356 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16357 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16358 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16359 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16360 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 16361 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 16362 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 16363 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 16364 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 16365 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 16366 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 16367 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 16368 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-

cent

16369 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16370 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; ccdot, ccdotaccent
16371 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16372 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16373 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16374 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16375 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16376 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16377 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16378 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16379 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16380 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16381 \DeclareTextCompositeCommand{\DJ}{PU}{\81\020}% U+0110
16382 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16383 % \textcrd (tipa)
16384 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16385 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16386 %* \textcrd -> \crossd (wsuipa)
16387 % An alternate glyph with the stroke through the bowl:
16388 %* \textcrd -> \textbard (tipa)
16389 %* \textcrd -> \bard (wsuipa)
16390 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16391 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16392 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16393 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16394 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16395 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16396 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16397 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16398 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16399 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16400 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16401 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16402 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16403 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16404 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16405 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16406 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16407 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16408 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16409 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16410 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16411 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16412 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16413 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16414 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16415 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16416 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16417 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16418 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16419 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16420 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16421 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16422 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent

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16423 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16424 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16425 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16426 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16427 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16428 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16429 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16430 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16431 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16432 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16433 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16434 %* \texthbar -> \textcrh (tipa)
16435 %* \texthbar -> \crossh (wsuipa)
16436 %* \texthbar -> \planck (phonetic)
16437 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16438 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16439 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16440 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16441 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16442 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16443 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16444 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16445 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16446 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16447 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16448 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16449 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16450 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16451 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16452 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16453 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16454 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16455 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16456 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16457 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16458 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16459 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16460 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16461 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16462 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16463 % U+0133 LATIN SMALL LIGATURE IJ; ij
16464 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16465 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16466 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16467 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16468 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16469 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16470 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16471 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16472 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16473 \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 chosen `\textkra`.

```

16474 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16475 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138

```

16476 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16477 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16478 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16479 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16480 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 16481 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16482 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16483 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16484 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16485 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16486 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16487 \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.
 16488 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
 cent
 16489 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16490 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16491 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16492 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16493 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16494 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16495 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16496 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16497 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16498 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16499 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16500 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 16501 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16502 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16503 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16504 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16505 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16506 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16507 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16508 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16509 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16510 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16511 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16512 % U+014B LATIN SMALL LETTER ENG; eng
 16513 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16514 %* \ng -> \eng (wsuipa)
 16515 %* \ng -> \engma (phonetic)
 16516 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16517 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16518 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16519 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16520 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16521 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16522 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16523 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16524 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbl-
 acute, Ohungarumlaut

16525 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
16526 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
16527 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
16528 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16529 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
16530 % U+0153 LATIN SMALL LIGATURE OE; oe
16531 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
16532 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16533 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
16534 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16535 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
16536 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
16537 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
16538 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16539 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
16540 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16541 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
16542 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16543 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
16544 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16545 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
16546 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16547 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
16548 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16549 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
16550 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16551 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
16552 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16553 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16554 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16555 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16556 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16557 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16558 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16559 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16560 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
16561 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16562 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16563 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16564 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16565 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16566 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16567 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16568 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16569 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16570 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16571 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16572 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16573 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16574 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16575 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16576 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16577 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16578 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron

16579 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16580 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16581 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16582 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16583 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16584 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16585 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16586 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16587 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16588 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 16589 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16590 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 16591 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16592 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16593 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16594 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16595 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16596 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16597 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16598 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16599 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16600 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16601 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16602 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16603 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16604 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16605 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16606 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16607 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16608 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16609 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16610 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16611 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16612 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16613 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16614 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16615 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16616 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16617 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16618 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16619 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16620 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16621 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16622 %* \textcrb -> \crossb (wsuipa)
 16623 % An alternate glyph with the stroke through the bowl:
 16624 %* \textcrb -> \textbarb (tipa)
 16625 %* \textcrb -> \barb (wsuipa)
 16626 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16627 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 16628 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16629 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16630 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-

netic)

16631 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A

16632 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed

16633 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E

16634 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E

16635 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

16636 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192

16637 %* \textflorin -> \Florin (marvosym)

16638 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)

16639 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195

16640 %* \texthvlig -> \hv (wsuipa)

16641 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)

16642 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198

16643 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)

16644 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199

16645 %* \texthtk -> \hausak (phonetic)

16646 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;

16647 % \textbarl (tipa), \barl (wsuipa)

16648 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A

16649 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/

16650 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;

16651 % \textcrlambda (tipa)

16652 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B

16653 %* \textcrlambda -> \crossnilambda (wsuipa)

16654 %* \textcrlambda -> \barlambd (phonetic)

16655 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)

16656 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)

16657 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;

16658 % \textnrleg (tipx)

16659 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E

16660 %* \textPUnrleg -> \textnrleg (tipx)

16661 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)

16662 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5

16663 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;

16664 % \textlhookt (tipa)

16665 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

16666 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)

16667 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD

16668 % U+01B9 LATIN SMALL LETTER EZH REVERSED/

16669 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)

16670 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9

16671 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)

16672 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB

16673 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;

16674 % glottalinvertedstroke; \textcrinvglotstop (tipa)

16675 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE

16676 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)

16677 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF

16678 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickdental;

16679 % \textpipe (tipa)

16680 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0

16681 %* \textpipe -> \textpipevar (tipx)

16682 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER

16683 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)

16684 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16685 %* \textdoublepipe -> \textdoublepipevar (tipx)
16686 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOUBLE BAR;
16687 % clickalveolar; \textdoublebarpipe (tipa)
16688 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16689 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16690 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16691 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16692 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16693 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16694 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16695 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16696 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16697 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16698 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16699 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16700 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16701 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16702 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16703 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16704 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16705 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16706 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16707 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16708 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16709 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16710 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16711 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16712 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16713 %* \textgslash -> \textcrg (tipa)
16714 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16715 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16716 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
16717 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16718 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16719 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16720 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
16721 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16722 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16723 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16724 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16725 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16726 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16727 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16728 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16729 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16730 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16731 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16732 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16733 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16734 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16735 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16736 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16737 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16738 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16739 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

16740 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16741 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16742 % *Oslashacute, Ostrokeacut
16743 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
16744 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16745 % *oslashacute, ostrokeacute
16746 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16747 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16748 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16749 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16750 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16751 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16752 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16753 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16754 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16755 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16756 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16757 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16758 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16759 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16760 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16761 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16762 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16763 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16764 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16765 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16766 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16767 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16768 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16769 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16770 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16771 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16772 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16773 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16774 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16775 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16776 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16777 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16778 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16779 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16780 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16781 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16782 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16783 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16784 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16785 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16786 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16787 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
16788 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217

16789 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16790 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16791 % U+021F LATIN SMALL LETTER H WITH CARON
 16792 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16793 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16794 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16795 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16796 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16797 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16798 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16799 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16800 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16801 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16802 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16803 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16804 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16805 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16806 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16807 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16808 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16809 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16810 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16811 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16812 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16813 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16814 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16815 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16816 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16817 % U+0237 LATIN SMALL LETTER DOTLESS J
 16818 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16819 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16820 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16821 %* \textPUdblig -> \textdblig (tipx)
 16822 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16823 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16824 %* \textPUqplig -> \textqplig (tipx)
 16825 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16826 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16827 %* \textslashc -> \textcentoldstyle (textcomp)
 16828 % With bar instead of stroke:
 16829 %* \textslashc -> \textbarc (tipa)

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

16830 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16831 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16832 %* \textturna -> \inva (wasysym)
 16833 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16834 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16835 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16836 %* \textscripta -> \vara (phonetic)
 16837 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16838 % \textturnscripta (tipa)
 16839 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16840 %* \textturnscripta -> \invscripta (wsuipa)
 16841 %* \textturnscripta -> \rotvara (phonetic)
 16842 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16843 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253

16844 %* \texthtb -> \hookb (wsuipa)
 16845 %* \texthtb -> \hausab (phonetic)
 16846 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16847 % \textopeno (tipa), \openo (wasysym)
 16848 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16849 %* \textopeno -> \varopeno (phonetic)
 16850 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16851 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16852 %* \textctc -> \curlyc (wsuipa)
 16853 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16854 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16855 %* \textrtaild -> \taild (wsuipa)
 16856 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16857 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16858 %* \texthtd -> \hookd (wsuipa)
 16859 %* \texthtd -> \hausad (phonetic)
 16860 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16861 % \textreve (tipa), \reve (wsuipa)
 16862 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16863 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16864 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16865 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16866 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16867 % \textrhookschwa (tipa)
 16868 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16869 %* \textrhookschwa -> \er (wsuipa)
 16870 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16871 % \niepsilon (wsuipa)
 16872 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16873 %* \textniepsilon -> \epsi (phonetic)
 16874 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16875 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16876 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16877 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16878 % \textrhookrevepsilon (tipa)
 16879 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
 16880 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16881 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16882 % \textcloserevepsilon (tipa)
 16883 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16884 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16885 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16886 % \textbardotlessj (tipa)
 16887 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16888 %* \textbardotlessj -> \barj (phonetic)
 16889 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16890 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16891 %* \texthtg -> \hookg (wsuipa)
 16892 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16893 % \textscriptg (tipa), \scriptg (wsuipa)
 16894 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16895 %* \textscriptg -> \varg (phonetic)
 16896 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)

16897 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16898 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16899 % \ipagamma (wsuipa), \vod (phonetic)
16900 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16901 %* \textipagamma -> \vod (pnonetic)
16902 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16903 % \babygamma (wsuipa)
16904 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16905 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16906 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16907 %* \textturnh -> \invh (wsuipa)
16908 %* \textturnh -> \udesc (phonetic)
16909 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16910 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16911 %* \texthth -> \hookh (wsuipa)
16912 %* \texthth -> \voicedh (phonetic)
16913 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16914 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16915 %* \texththeng -> \hookheng (wsuipa)
16916 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16917 % \textbari (tipa), \bari (wsuipa)
16918 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16919 %* \textbari -> \ibar (phonetic)
16920 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \nniota (wsuipa)
16921 \DeclareTextCommand{\textnniota}{PU}{\82\151}%* U+0269
16922 %* \textnniota -> \vari (phonetic)
16923 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16924 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16925 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16926 % \textltilde (tipa)
16927 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16928 %* \textltilde -> \tildel (wsuipa)
16929 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16930 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16931 %* \textbeltl -> \latfric (wsuipa)
16932 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16933 % \hookretroflex; \textrtaill (tipa)
16934 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16935 %* \textrtaill -> \taill (wsuipa)
16936 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16937 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16938 %* \textlyoghlig -> \lz (wsuipa)
16939 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16940 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16941 %* \textturnm -> \invm (wsuipa)
16942 %* \textturnm -> \rotm (phonetic)
16943 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16944 % \textturnmrleg (tipa)
16945 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16946 %* \textturnmrleg -> \legm (wsuipa)
16947 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16948 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16949 %* \textltailm -> \labdentálnas (wsuipa)
16950 %* \textltailm -> \emgma (phonetic)
16951 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-

tailn (tipa)

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16952 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16953 %* \textltailn -> \nj (wsuipa)
16954 %* \textltailn -> \enya (phonetic)
16955 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16956 %   nhookretroflex; \textrtailn (tipa)
16957 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16958 %* \textrtailn -> \tailn (wsuipa)
16959 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16960 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16961 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16962 %   LATIN CAPITAL LETTER BARRED O; obarred;
16963 %   \textbaro (tipa), \baro (wsuipa)
16964 % But \baro from stmaryrd is different!
16965 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16966 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoe (tipa)
16967 \DeclareTextCommand{\textscoe}{PU}{\82\166}% U+0276
16968 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16969 %   \textcloseomega (tipa)
16970 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16971 %* \textcloseomega -> \closedniomega (wsuipa)
16972 %* \textcloseomega -> \varomega (phonetic)
16973 % U+0278 LATIN SMALL LETTER PHI; philatin; \nphi (wsuipa)
16974 \DeclareTextCommand{\textnphi}{PU}{\82\170}%* U+0278
16975 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16976 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16977 %* \textturnr -> \invr (wsuipa)
16978 %* \textturnr -> \rotr (phonetic)
16979 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16980 %   rlonglegturned; \textturnrlongleg (tipa)
16981 \DeclareTextCommand{\textturnrlongleg}{PU}{\82\172}% U+027A
16982 %* \textturnrlongleg -> \invleg (wsuipa)
16983 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16984 %   \textturnrrtail (tipa)
16985 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16986 %* \textturnrrtail -> \tailinvr (wsuipa)
16987 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16988 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16989 %* \textlongleg -> \leg (wsuipa)
16990 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
16991 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16992 %* \textrtailr -> \tailr (wsuipa)
16993 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16994 %   \textfishhookr (tipa)
16995 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16996 %* \textfishhookr -> \flapr (wsuipa)
16997 %* \textfishhookr -> \flap (phonetic)
16998 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16999 %   \textlhtlongi (tipa)
17000 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17001 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17002 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17003 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17004 %   \textinvscr (tipa), \invscr (wsuipa)
17005 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281

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17006 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \texttrails (tipa)
17007 \DeclareTextCommand{\texttrails}{PU}{\82\202}% U+0282
17008 %* \texttrails -> \tails (wsuipa)
17009 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17010 \DeclareTextCommand{\textesh}{PU}{\82\203}% U+0283
17011 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17012 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17013 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17014 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquat-
versed;
17015 % \textvibyi (tipa)
17016 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17017 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17018 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17019 %* \textctesh -> \curlyesh (wsuipa)
17020 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17021 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17022 %* \textturnt -> \clickt (wsuipa)
17023 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
17024 % \texttrtailt (tipa)
17025 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
17026 %* \texttrtailt -> \tailt (wsuipa)
17027 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17028 % \textbaru (tipa), \baru (wsuipa)
17029 \DeclareTextCommand{\textbaru}{PU}{\82\211}% U+0289
17030 %* \textbaru -> \ubar (phonetic)
17031 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17032 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}% U+028A
17033 %* \textniupsilon -> \rotOmega (phonetic)
17034 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
17035 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17036 \DeclareTextCommand{\textscriptv}{PU}{\82\213}% U+028B
17037 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17038 \DeclareTextCommand{\textturnv}{PU}{\82\214}% U+028C
17039 %* \textturnv -> \invv (wsuipa)
17040 %* \textturnv -> \pwedge (phonetic)
17041 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17042 \DeclareTextCommand{\textturnw}{PU}{\82\215}% U+028D
17043 %* \textturnw -> \invw (wsuipa)
17044 %* \textturnw -> \rotw (phonetic)
17045 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17046 \DeclareTextCommand{\textturny}{PU}{\82\216}% U+028E
17047 %* \textturny -> \invy (wsuipa)
17048 %* \textturny -> \roty (phonetic)
17049 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17050 \DeclareTextCommand{\textscy}{PU}{\82\217}% U+028F
17051 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
hook;
17052 % \texttrtailz (tipa)
17053 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
17054 %* \texttrtailz -> \tailz (wsuipa)
17055 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17056 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17057 %* \textctz -> \curlyz (wsuipa)
17058 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;

17059 % \textyogh (tipa), \yogh (wsuipa)
17060 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17061 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17062 % ezhcurl; \textctyogh (tipa)
17063 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17064 %* \textctyogh -> \curlyyogh (wsuipa)
17065 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17066 % \textglotstop (tipa), \glotstop (wsuipa)
17067 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17068 %* \textglotstop -> \ejective (wsuipa)
17069 %* \textglotstop -> \glottal (phonetic)
17070 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17071 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17072 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17073 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17074 %* \textrevglotstop -> \reveject (wsuipa)
17075 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17076 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17077 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17078 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17079 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17080 %* \textstretchc -> \clickc (wsuipa)
17081 %* \textstretchc -> \textstretchcvar (tipx)
17082 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17083 % \textbullseye (tipa)
17084 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17085 %* \textbullseye -> \clickb (wsuipa)
17086 %* \textbullseye -> \textObullseye (tipx)
17087 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17088 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17089 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17090 % \textclosepsilon (tipa)
17091 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
17092 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17093 % \texthtscg (tipa)
17094 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17095 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17096 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17097 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
17098 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17099 %* \textctj -> \textctjvar (tipx)
17100 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17101 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17102 %* \textturnk -> \textturnsck (tipx)
17103 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17104 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17105 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
17106 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17107 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstopstroke;
17108 % \textbarglotstop (tipa)
17109 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17110 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17111 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;

17112 % \textbarrevglotstop (tipa)
 17113 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17114 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17115 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17116 %* \textdzlig -> \dz (wsupipa)
 17117 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 17118 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17119 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17120 % \textdctzlig (tipa)
 17121 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17122 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17123 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17124 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 17125 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 17126 %* \textteshlig -> \tesh (wsuipa)
 17127 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17128 % \texttctclig (tipa)
 17129 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17130 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17131 % \textlhtlongy (tipa)
 17132 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17133 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17134 % \textvibyy (tipa)
 17135 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

17136 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17137 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17138 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17139 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17140 % \textraiseglotstop (tipa)
 17141 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17142 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17143 % \textlptr (tipa)
 17144 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17145 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17146 % \textrptr (tipa)
 17147 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 17148 % U+02C7 CARON; caron
 17149 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17150 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17151 % \textprimstress (tipa)
 17152 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17153 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17154 % \textsecstress (tipa)
 17155 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17156 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17157 % \textlengthmark (tipa)
 17158 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17159 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17160 % \texthalflength (tipa)
 17161 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17162 % U+02D8 BREVE; breve
 17163 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17164 % U+02D9 DOT ABOVE; dotaccent

17165 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17166 % U+02DA RING ABOVE; ring
 17167 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17168 % U+02DB OGONEK; ogonek
 17169 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17170 % U+02DC SMALL TILDE; ilde, *tilde
 17171 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17172 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17173 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17174 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17175 % U+02F3 MODIFIER LETTER LOW RING
 17176 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17177 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17178 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17179 % U+02F7 MODIFIER LETTER LOW TILDE
 17180 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17181 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17182 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17183 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17184 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

17185 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17186 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17187 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17188 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17189 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17190 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17191 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17192 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17193 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 17194 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

17195 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17196 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17197 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17198 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17199 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 17200 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17201 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17202 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17203 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17204 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17205 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17206 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17207 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 17208 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 17209 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 17210 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 17211 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 17212 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 17213 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 17214 % \textiotadieresis
 17215 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390

17216 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17217 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17218 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17219 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17220 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17221 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17222 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
17223 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17224 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17225 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17226 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17227 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17228 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17229 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17230 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17231 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17232 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17233 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17234 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17235 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17236 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17237 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17238 % U+039C GREEK CAPITAL LETTER MU; Mu
17239 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17240 % U+039D GREEK CAPITAL LETTER NU; Nu
17241 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17242 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17243 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17244 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17245 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17246 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17247 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17248 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17249 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17250 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17251 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17252 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17253 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17254 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17255 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17256 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17257 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17258 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17259 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17260 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17261 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17262 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17263 % \Omega (LaTeX)
17264 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17265 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17266 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17267 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17268 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
17269 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17270 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos

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17271 \DeclareTextCompositeCommand{\'}{PU}{\textalpha}{\83\254}%* U+03AC
17272 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon-tonos
17273 \DeclareTextCompositeCommand{\'}{PU}{\textepsilon}{\83\255}% U+03AD
17274 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; eta-tonos
17275 \DeclareTextCompositeCommand{\'}{PU}{\texteta}{\83\256}% U+03AE
17276 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iota-tonos
17277 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\257}% U+03AF
17278 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17279 % AND TONOS; upsilon-dieresisto
17280 \DeclareTextCompositeCommand{\'}{PU}{\textupsilonacute}{\83\260}% U+03B0
17281 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17282 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17283 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17284 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17285 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17286 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17287 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17288 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17289 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17290 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17291 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17292 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17293 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17294 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17295 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17296 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17297 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17298 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17299 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17300 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17301 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17302 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17303 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17304 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17305 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17306 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17307 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17308 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17309 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17310 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17311 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17312 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17313 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17314 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17315 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17316 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17317 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17318 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17319 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17320 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17321 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17322 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17323 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17324 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17325 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17326 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17327 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)

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17328 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17329 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17330 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17331 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17332 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17333 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
        silondieresis
17334 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17335 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17336 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17337 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17338 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17339 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17340 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17341 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17342 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17343 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17344 % U+03DB GREEK SMALL LETTER STIGMA
17345 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17346 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17347 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17348 % U+03DD GREEK SMALL LETTER DIGAMMA
17349 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17350 %* \textdigammagreek -> \digamma (AmS)
17351 % U+03DE GREEK LETTER KOPPA; Koppagreek
17352 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17353 % U+03DF GREEK SMALL LETTER KOPPA
17354 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17355 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17356 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17357 % U+03E1 GREEK SMALL LETTER SAMPI
17358 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17359 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17360 % \backepsilon (AmS)
17361 \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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17362 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17363 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
17364 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afi10023
17365 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17366 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17367 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
17368 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17369 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052
17370 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
17371 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afi10053
17372 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17373 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afi10054
17374 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17375 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17376 % Icyrrilic, *afi10055
17377 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17378 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afi10056
17379 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407

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17380 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
17381 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17382 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17383 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17384 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17385 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17386 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17387 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17388 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17389 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17390 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C
17391 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17392 \DeclareTextCompositeCommand{'}{PU}{\CYRI}{\84\015}% U+040D
17393 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17394 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17395 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17396 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17397 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17398 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17399 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17400 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17401 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17402 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17403 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17404 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17405 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17406 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17407 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17408 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17409 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17410 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17411 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17412 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17413 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17414 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17415 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17416 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; lishortcyrillic, *afii10027
17417 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17418 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17419 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17420 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17421 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17422 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17423 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17424 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17425 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17426 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17427 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17428 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17429 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17430 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17431 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17432 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17433 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17434 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17435 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17436 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422

17437 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17438 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17439 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17440 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17441 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17442 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17443 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17444 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17445 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17446 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17447 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17448 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17449 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17450 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17451 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17452 % Hardsigncyrillic, *afii10044
17453 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17454 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17455 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17456 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17457 % Softsigncyrillic, *afii10046
17458 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17459 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17460 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17461 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17462 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17463 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17464 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17465 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17466 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17467 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17468 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17469 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17470 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17471 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17472 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17473 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17474 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17475 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17476 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17477 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17478 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17479 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17480 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17481 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17482 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17483 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17484 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17485 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17486 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17487 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17488 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17489 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
17490 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17491 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17492 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17493 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D

17494 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17495 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17496 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17497 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17498 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17499 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17500 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17501 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17502 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17503 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17504 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17505 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17506 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17507 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17508 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17509 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17510 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17511 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17512 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17513 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17514 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17515 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17516 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17517 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17518 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17519 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
17520 %* \cyrhdsn -> \hardsign (tipa)
17521 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17522 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
17523 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17524 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
17525 %* \cyrsftsn -> \softsign (tipa)
17526 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17527 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
17528 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17529 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17530 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17531 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17532 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17533 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
17534 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17535 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17536 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17537 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17538 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17539 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17540 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17541 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17542 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17543 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17544 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17545 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17546 % *afii10103, icyrillic
17547 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17548 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17549 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457

17550 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
17551 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17552 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17553 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17554 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
17555 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17556 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17557 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17558 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17559 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17560 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
17561 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17562 \DeclareTextCompositeCommand{'}{PU}{\cyri}{\84\135}% U+045D
17563 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17564 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17565 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17566 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17567 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17568 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17569 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17570 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17571 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17572 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17573 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17574 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17575 \DeclareTextCommand{\cyr yat}{PU}{\84\143}% U+0463
17576 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17577 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17578 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17579 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17580 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17581 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17582 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17583 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17584 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17585 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17586 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17587 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17588 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17589 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17590 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17591 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17592 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17593 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17594 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17595 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17596 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17597 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17598 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17599 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17600 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17601 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17602 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic

17603 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17604 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afi10147
17605 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17606 % U+0473 CYRILLIC SMALL LETTER FITA; *afi10195, fitacyrillic
17607 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17608 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afi10148
17609 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17610 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afi10196, izhitsacyrillic
17611 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17612 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
17613 % GRAVE ACCENT; Izhitsadblgravecyrillic
17614 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17615 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
17616 % GRAVE ACCENT; izhitsadblgravecyrillic
17617 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17618 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17619 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17620 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17621 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17622 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
17623 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17624 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17625 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17626 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
locyrillic
17627 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17628 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
cyrillic
17629 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17630 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17631 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17632 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17633 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
17634 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
17635 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
17636 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
17637 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
17638 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
17639 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
cyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
matacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
acyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
17640 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
17641 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
17642 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
17643 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
17644 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
17645 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C

17646 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17647 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17648 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17649 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17650 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17651 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17652 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17653 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17654 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17655 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17656 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17657 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17658 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17659 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17660 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17661 % Ghemiddlehookcyrillic
 17662 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17663 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17664 % ghemiddlehookcyrillic
 17665 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17666 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17667 % Zhedescendercyrillic
 17668 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17669 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17670 % zhedescendercyrillic
 17671 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17672 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 17673 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17674 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17675 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 17676 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17677 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17678 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 17679 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17680 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 17681 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17682 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17683 % Kavertikalstrokecyrillic
 17684 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17685 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17686 % kavertikalstrokecyrillic
 17687 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17688 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17689 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17690 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17691 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17692 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17693 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17694 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17695 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17696 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 17697 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17698 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 17699 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17700 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17701 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17702 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17703 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17704 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 17705 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17706 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 17707 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17708 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 17709 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17710 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17711 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17712 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 17713 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17714 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17715 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 17716 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17717 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 17718 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 17719 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17720 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 17721 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 17722 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17723 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17724 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17725 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17726 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 17727 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17728 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 17729 \DeclareTextCommand{\cyr yhcrs}{PU}{\84\261}% U+04B1
 17730 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
 17731 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 17732 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 17733 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17734 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17735 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17736 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17737 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17738 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17739 % Chedescendercyrillic

17740 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17741 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17742 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17743 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17744 % Cheverticalstrokecyrillic
17745 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17746 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17747 % cheverticalstrokecyrillic
17748 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17749 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17750 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17751 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17752 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17753 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17754 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17755 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17756 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17757 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17758 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17759 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17760 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17761 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17762 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17763 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17764 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17765 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17766 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17767 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17768 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17769 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17770 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17771 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17772 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17773 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17774 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17775 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17776 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
17777 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17778 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17779 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17780 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17781 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakasiancyrillic
17782 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17783 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
17784 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17785 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17786 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17787 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17788 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA

17789 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
17790 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17791 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
17792 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
17793 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
17794 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
17795 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
17796 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
17797 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
17798 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17799 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
17800 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17801 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevocyrillic
17802 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17803 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevocyrillic
17804 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17805 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
17806 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17807 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
17808 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
17809 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17810 % Schwadieresiscyrillic
17811 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17812 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17813 % schwadieresiscyrillic
17814 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
17815 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17816 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
17817 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17818 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
17819 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17820 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
17821 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17822 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
17823 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
17824 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17825 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17826 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17827 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
17828 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
17829 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17830 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
17831 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17832 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
17833 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17834 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
17835 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17836 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
17837 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17838 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17839 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17840 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17841 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17842 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17843 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17844 % Obarreddieresiscyrillic
17845 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
17846 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17847 % obarreddieresiscyrillic
17848 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
17849 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17850 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
17851 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17852 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
17853 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17854 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
17855 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17856 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
17857 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17858 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17859 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17860 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
17861 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic
17862 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
17863 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
garumlautcyrillic
17864 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
17865 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17866 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
17867 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chediere-
siscyrillic
17868 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17869 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17870 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17871 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17872 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17873 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17874 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17875 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17876 \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
17877 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17878 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17879 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17880 \DeclareTextCommand{\cyrrhk}{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`.

```
17881 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17882 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17883 % U+05D0 HEBREW LETTER ALEF
17884 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17885 % U+05D1 HEBREW LETTER BET
17886 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17887 % U+05D2 HEBREW LETTER GIMEL
17888 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17889 % U+05D3 HEBREW LETTER DALET
17890 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17891 % U+05D4 HEBREW LETTER HE
17892 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17893 % U+05D5 HEBREW LETTER VAV
17894 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17895 % U+05D6 HEBREW LETTER ZAYIN
17896 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17897 % U+05D7 HEBREW LETTER HET
17898 \DeclareTextCommand{\hebbhet}{PU}{\85\327}% U+05D7
17899 % U+05D8 HEBREW LETTER TET
17900 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17901 % U+05D9 HEBREW LETTER YOD
17902 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17903 % U+05DA HEBREW LETTER FINAL KAF
17904 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17905 % U+05DB HEBREW LETTER KAF
17906 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17907 % U+05DC HEBREW LETTER LAMED
17908 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17909 % U+05DD HEBREW LETTER FINAL MEM
17910 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17911 % U+05DE HEBREW LETTER MEM
17912 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
17913 % U+05DF HEBREW LETTER FINAL NUN
17914 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17915 % U+05E0 HEBREW LETTER NUN
17916 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17917 % U+05E1 HEBREW LETTER SAMEKH
17918 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17919 % U+05E2 HEBREW LETTER AYIN
17920 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17921 % U+05E3 HEBREW LETTER FINAL PE
17922 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
17923 % U+05E4 HEBREW LETTER PE
17924 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
17925 % U+05E5 HEBREW LETTER FINAL TSADI
17926 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
17927 % U+05E6 HEBREW LETTER TSADI
17928 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
17929 % U+05E7 HEBREW LETTER QOF
17930 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
17931 % U+05E8 HEBREW LETTER RESH
17932 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
17933 % U+05E9 HEBREW LETTER SHIN
17934 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
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17935 %* \hebshin -> \hebsin (he8)
 17936 % U+05EA HEBREW LETTER TAV
 17937 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17938 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17939 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17940 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17941 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17942 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17943 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17944 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17945 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17946 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17947 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17948 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17949 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 17950 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17951 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17952 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17953 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17954 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textस्क (tipx)
 17955 \DeclareTextCommand{\textPUस्क}{PU}{\9035\013}% U+1D0B
 17956 %* \textPUस्क -> \textस्क (tipx)
 17957 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17958 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17959 %* \textPUscm -> \textscm (tipx)
 17960 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 17961 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 17962 %* \textPUscp -> \textscp (tipx)
 17963 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17964 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17965 %* \textPUrevscr -> \textrevscr (tipx)
 17966 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17967 \DeclareTextCommand{\textscu}{PU}{\9035\034}% U+1D1C
 17968 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17969 \DeclareTextCommand{\textiiinferior}{PU}{\9035\142}% U+1D62
 17970 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17971 \DeclareTextCommand{\textriinferior}{PU}{\9035\143}% U+1D63
 17972 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17973 \DeclareTextCommand{\textuiinferior}{PU}{\9035\144}% U+1D64
 17974 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17975 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}% U+1D65
 17976 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17977 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}% U+1D66
 17978 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17979 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}% U+1D67
 17980 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17981 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}% U+1D68
 17982 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17983 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}% U+1D69
 17984 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17985 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}% U+1D6A
 17986 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;

17987 % \barsci (wsuipa)
17988 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
17989 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17990 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
17991 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
17992 % \barscu (wsuipa)
17993 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17994 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
trhooka (tipx)
17995 \DeclareTextCommand{\textPurhooka}{PU}{\9035\217}% U+1D8F
17996 %* \textPurhooka -> \textrhooka (tipx)
17997 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
taild (tipa)
17998 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
17999 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
trhooke (tipx)
18000 \DeclareTextCommand{\textPurhooke}{PU}{\9035\222}% U+1D92
18001 %* \textPurhooke -> \textrhooke (tipx)
18002 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
18003 % \textrhookepsilon (tipx)
18004 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
18005 %* \textPurhookepsilon -> \textrhookepsilon (tipx)
18006 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
18007 % \textrhookopeno (tipx)
18008 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
18009 %* \textPurhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18010 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
18011 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
18012 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
18013 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18014 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18015 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
18016 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18017 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
18018 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18019 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18020 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18021 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18022 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18023 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18024 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18025 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18026 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18027 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
18028 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18029 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
18030 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18031 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18032 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18033 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18034 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18035 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18036 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow

18037 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18038 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18039 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18040 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18041 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18042 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18043 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18044 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18045 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18046 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18047 % Emacrongrave
18048 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18049 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18050 % emacrongrave
18051 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18052 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18053 % Emacronacute
18054 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18055 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18056 % emacronacute
18057 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18058 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18059 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18060 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18061 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18062 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18063 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18064 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18065 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18066 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18067 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18068 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18069 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18070 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18071 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18072 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18073 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18074 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18075 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18076 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18077 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18078 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18079 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18080 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18081 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18082 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18083 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18084 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18085 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18086 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18087 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18088 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18089 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29

18090 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
 18091 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
 18092 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
 18093 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
 18094 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
 18095 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
 18096 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
 18097 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
 18098 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 18099 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 18100 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 18101 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
 18102 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
 18103 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
 18104 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
 18105 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
 18106 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
 18107 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
 18108 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
 18109 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
 18110 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
 18111 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
 18112 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
 18113 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
 18114 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
 18115 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
 18116 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
 18117 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
 18118 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
 cumflexbelow
 18119 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
 18120 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
 cumflexbelow
 18121 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
 18122 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 18123 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
 18124 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 18125 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
 18126 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 18127 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 18128 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 18129 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 18130 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 18131 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
 18132 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 18133 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
 18134 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18135 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 18136 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18137 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18138 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18139 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18140 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18141 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18142 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18143 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18144 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow

18145 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
18146 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
18147 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
18148 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
18149 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
18150 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
18151 % Omacrongrave
18152 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
18153 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
18154 % omacrongrave
18155 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
18156 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
18157 % Omacronacute
18158 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
18159 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
18160 % omacronacute
18161 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
18162 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
18163 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
18164 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
18165 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
18166 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
18167 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
18168 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
18169 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
18170 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
18171 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
18172 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
18173 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
18174 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
18175 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
18176 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
18177 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
18178 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
18179 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
18180 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
18181 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
18182 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
18183 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
18184 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
18185 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
18186 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
18187 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
18188 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
18189 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
18190 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
18191 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
18192 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
18193 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
18194 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
18195 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
18196 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
18197 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
18198 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
18199 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E

18200 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18201 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18202 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18203 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18204 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18205 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18206 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18207 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18208 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18209 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18210 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18211 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18212 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18213 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18214 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18215 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18216 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18217 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18218 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18219 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18220 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18221 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18222 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18223 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18224 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18225 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18226 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 18227 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 18228 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 18229 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 18230 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 18231 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 18232 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 18233 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 18234 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 18235 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 18236 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 18237 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 18238 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 18239 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 18240 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 18241 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 18242 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 18243 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 18244 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 18245 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 18246 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 18247 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 18248 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 18249 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 18250 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis

18251 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 18252 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 18253 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 18254 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 18255 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 18256 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 18257 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 18258 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 18259 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 18260 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 18261 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 18262 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
 18263 \DeclareTextCompositeCommand{d}{PU}{Z}{\9036\222}% U+1E92
 18264 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
 18265 \DeclareTextCompositeCommand{d}{PU}{z}{\9036\223}% U+1E93
 18266 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 18267 \DeclareTextCompositeCommand{b}{PU}{Z}{\9036\224}% U+1E94
 18268 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 18269 \DeclareTextCompositeCommand{b}{PU}{z}{\9036\225}% U+1E95
 18270 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 18271 \DeclareTextCompositeCommand{b}{PU}{h}{\9036\226}% U+1E96
 18272 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 18273 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 18274 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 18275 \DeclareTextCompositeCommand{r}{PU}{w}{\9036\230}% U+1E98
 18276 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 18277 \DeclareTextCompositeCommand{r}{PU}{y}{\9036\231}% U+1E99
 18278 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 taccent
 18279 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 18280 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 18281 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}% U+1EA0
 18282 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 18283 \DeclareTextCompositeCommand{d}{PU}{a}{\9036\241}% U+1EA1
 18284 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18285 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}% U+1EB8
 18286 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18287 \DeclareTextCompositeCommand{d}{PU}{e}{\9036\271}% U+1EB9
 18288 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18289 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
 18290 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18291 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}% U+1EBD
 18292 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18293 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}% U+1ECA
 18294 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18295 \DeclareTextCompositeCommand{d}{PU}{i}{\9036\313}% U+1ECB
 18296 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18297 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}% U+1ECC
 18298 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18299 \DeclareTextCompositeCommand{d}{PU}{o}{\9036\315}% U+1ECD
 18300 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18301 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}% U+1EE4
 18302 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18303 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}% U+1EE5
 18304 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18305 \DeclareTextCompositeCommand{'}{PU}{Y}{\9036\362}% U+1EF2
 18306 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave

18307 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 18308 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18309 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18310 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18311 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18312 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18313 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18314 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18315 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18316 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18317 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18318 % U+2013 EN DASH; endash
 18319 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18320 % U+2014 EM DASH; emdash
 18321 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18322 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18323 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18324 %* \textbardbl -> \textdoublevertline (tipa)
 18325 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18326 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18327 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18328 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18329 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18330 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18331 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18332 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18333 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18334 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18335 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18336 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18337 % U+2020 DAGGER; dagger
 18338 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18339 %* \textdagger -> \dag (LaTeX)
 18340 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18341 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18342 %* \textdaggerdbl -> \ddagger (LaTeX)
 18343 %* \textdaggerdbl -> \ddag (LaTeX)
 18344 % U+2022 BULLET; bullet
 18345 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18346 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18347 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18348 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18349 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18350 %* \textellipsis -> \mathellipsis
 18351 % U+2030 PER MILLE SIGN; perthousand
 18352 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18353 % U+2031 PER TEN THOUSAND SIGN
 18354 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18355 % U+2032 PRIME; minute; \prime (MnSymbol)
 18356 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18357 % U+2033 DOUBLE PRIME; \second (mathabx)
 18358 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18359 % U+2034 TRIPLE PRIME; \third (mathabx)
 18360 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18361 % U+2035 REVERSED PRIME; \backprime (AmsS)

18362 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18363 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18364 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 18365 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 18366 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 18367 % U+203B REFERENCE MARK; referencemark
 18368 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18369 % U+203D INTERROBANG
 18370 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18371 % U+2044 FRACTION SLASH; fraction
 18372 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18373 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18374 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18375 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18376 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18377 % U+2052 COMMERCIAL MINUS SIGN
 18378 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18379 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18380 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18381 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18382 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18383 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18384 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18385 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18386 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18387 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18388 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18389 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18390 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18391 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18392 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18393 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18394 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18395 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18396 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18397 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18398 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18399 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18400 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18401 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18402 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18403 % U+207B SUPERSCRIPT MINUS
 18404 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18405 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18406 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}%* U+207C
 18407 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18408 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18409 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18410 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18411 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18412 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18413 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18414 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080

18415 % U+2081 SUBSCRIPT ONE; oneinferior
 18416 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18417 % U+2082 SUBSCRIPT TWO; twoinferior
 18418 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18419 % U+2083 SUBSCRIPT THREE; threeinferior
 18420 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18421 % U+2084 SUBSCRIPT FOUR; fourinferior
 18422 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18423 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18424 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18425 % U+2086 SUBSCRIPT SIX; sixinferior
 18426 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18427 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18428 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18429 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18430 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18431 % U+2089 SUBSCRIPT NINE; nineinferior
 18432 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18433 % U+208A SUBSCRIPT PLUS SIGN
 18434 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18435 % U+208B SUBSCRIPT MINUS
 18436 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18437 % U+208C SUBSCRIPT EQUALS SIGN
 18438 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18439 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18440 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18441 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18442 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18443 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18444 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18445 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18446 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18447 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18448 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18449 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18450 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18451 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18452 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18453 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18454 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18455 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18456 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18457 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18458 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18459 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18460 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18461 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18462 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18463 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18464 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18465 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18466 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18467 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18468 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18469 % U+20A1 COLON SIGN; *colonmonetary, colonsign

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18470 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
18471 % U+20A4 LIRA SIGN; afii08941, *lira
18472 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
18473 % U+20A6 NAIRA SIGN
18474 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
18475 % U+20A7 PESETA SIGN; peseta
18476 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
18477 % U+20A9 WON SIGN; won
18478 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
18479 % U+20AB DONG SIGN; dong
18480 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
18481 % U+20AC EURO SIGN; *Euro, euro
18482 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
18483 %* \texteuro -> \EurDig (marvosym)
18484 %* \texteuro -> \EURdig (marvosym)
18485 %* \texteuro -> \EurHv (marvosym)
18486 %* \texteuro -> \EURhv (marvosym)
18487 %* \texteuro -> \EurCr (marvosym)
18488 %* \texteuro -> \EURcr (marvosym)
18489 %* \texteuro -> \EurTm (marvosym)
18490 %* \texteuro -> \EURtm (marvosym)
18491 %* \texteuro -> \Eur (marvosym)
18492 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
18493 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
18494 %* \textDeleatur -> \Denarius (marvosym)
18495 % U+20B1 PESO SIGN
18496 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
18497 % U+20B2 GUARANI SIGN
18498 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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51.2.19 Letterlike Symbols: U+2100 to U+214F

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18499 % U+2103 DEGREE CELSIUS; centigrade
18500 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
18501 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
18502 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
18503 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
18504 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
18505 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
18506 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
18507 % U+2116 NUMERO SIGN; *afii61352, numero
18508 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
18509 % U+2117 SOUND RECORDING COPYRIGHT
18510 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
18511 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
18512 % weierstrass; \wp (LaTeX)
18513 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
18514 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
18515 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
18516 % U+211E PRESCRIPTION TAKE; prescription
18517 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
18518 % U+2120 SERVICE MARK
18519 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
18520 % U+2122 TRADE MARK SIGN; trademark
18521 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
18522 % U+2126 OHM SIGN; Ohm, Omega
18523 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126

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18524 % U+2127 INVERTED OHM SIGN
 18525 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18526 %* \textmho -> \agemO (wasysym)
 18527 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18528 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18529 % U+212B ANGSTROM SIGN; angstrom
 18530 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18531 % U+212E ESTIMATED SYMBOL; estimated
 18532 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18533 %* \textestimated -> \EstimatedSign (marvosym)
 18534 %* \textestimated -> \Ecommerce (marvosym)
 18535 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18536 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18537 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18538 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18539 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18540 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18541 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18542 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18543 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18544 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18545 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18546 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18547 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18548 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18549 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18550 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18551 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18552 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18553 % U+2150 VULGAR FRACTION ONE SEVENTH
 18554 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18555 % U+2151 VULGAR FRACTION ONE NINTH
 18556 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18557 % U+2152 VULGAR FRACTION ONE TENTH
 18558 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18559 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18560 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18561 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18562 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18563 % U+2155 VULGAR FRACTION ONE FIFTH
 18564 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18565 % U+2156 VULGAR FRACTION TWO FIFTHS
 18566 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18567 % U+2157 VULGAR FRACTION THREE FIFTHS
 18568 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18569 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18570 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18571 % U+2159 VULGAR FRACTION ONE SIXTH
 18572 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18573 % U+215A VULGAR FRACTION FIVE SIXTHS
 18574 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18575 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18576 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18577 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18578 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C

18579 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
18580 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
18581 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
18582 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
18583 % U+2184 LATIN SMALL LETTER REVERSED C
18584 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
18585 % U+2189 VULGAR FRACTION ZERO THIRDS
18586 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18587 % U+2190 LEFTWARDS ARROW; arrowleft
18588 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
18589 % U+2191 UPWARDS ARROW; arrowup
18590 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
18591 % U+2192 RIGHTWARDS ARROW; arrowright
18592 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
18593 %* \textrightarrow -> \MVRightArrow (marvosym)
18594 %* \textrightarrow -> \MVRightarrow (marvosym)
18595 % U+2193 DOWNWARDS ARROW; arrowdown
18596 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
18597 %* \textdownarrow -> \MVArrowDown (marvosym)
18598 %* \textdownarrow -> \Force (marvosym)
18599 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
18600 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
18601 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
18602 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
18603 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
18604 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
18605 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
18606 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
18607 %* \textnearrow -> \textglobrise (tipa)
18608 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
18609 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
18610 %* \textsearrow -> \textglobfall (tipa)
18611 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18612 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18613 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18614 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18615 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
18616 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18617 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18618 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18619 % \ntwoheadleftarrow (txfonts/pxfonts)
18620 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18621 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18622 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18623 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18624 % \twoheadrightarrow (AmS)
18625 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18626 % \ntwoheadrightarrow (txfonts/pxfonts)
18627 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18628 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18629 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18630 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18631 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18632 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)

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18633 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18634 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18635 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18636 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18637 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18638 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18639 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18640 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18641 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18642 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18643 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18644 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrows (AmS)
18645 \DeclareTextCommand{\textnleftrightarrows}{PU}{\9041\256}%* U+21AE
18646 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18647 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18648 %* \textlightning -> \Lightning (marvosym)
18649 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18650 % \dls (mathabx)
18651 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18652 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18653 % \curvearrowleft (AmS)
18654 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18655 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18656 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18657 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
    barbup;
18658 % \leftharpoonup (LaTeX)
18659 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18660 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18661 % \leftharpoondown (LaTeX)
18662 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18663 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18664 % \upharpoonright (AmS)
18665 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18666 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18667 % \upharpoonleft (AmS)
18668 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18669 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
18670 % \rightharpoonup (LaTeX)
18671 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18672 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18673 % \rightharpoondown (LaTeX)
18674 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18675 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18676 % \downharpoonright (AmS)
18677 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18678 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18679 % \downharpoonleft (AmS)
18680 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18681 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18682 % \rightarrowoverleftarrow; \rightleftarrows (MnSymbol)
18683 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18684 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
18685 % \updownarrows (MnSymbol)
18686 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5

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18687 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
 overright;
 18688 % \leftrightharrows (AmS)
 18689 \DeclareTextCommand{\textleftrightharrows}{PU}{\9041\306}%* U+21C6
 18690 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
 18691 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
 18692 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
 18693 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
 18694 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
 18695 \DeclareTextCommand{\textrightrightarrows}{PU}{\9041\311}%* U+21C9
 18696 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
 18697 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
 18698 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
 18699 % \leftrightharpoons (AmS);
 18700 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
 18701 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
 18702 % \rightleftharpoons (LaTeX, AmS)
 18703 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
 18704 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
 blstroke;
 18705 % \nLeftarrow (AmS)
 18706 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
 18707 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
 row (AmS)
 18708 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
 18709 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
 blstroke;
 18710 % \nRightarrow (AmS)
 18711 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
 18712 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
 18713 % \Leftarrow (LaTeX)
 18714 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
 18715 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
 18716 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
 18717 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
 18718 % \Rightarrow (LaTeX)
 18719 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
 18720 %* \textRightarrow -> \Conclusion (marvosym)
 18721 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
 TeX)
 18722 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
 18723 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
 18724 % \Leftrightarrow (LaTeX)
 18725 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
 18726 %* \textLeftrightarrow -> \Equivalence (marvosym)
 18727 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
 18728 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
 18729 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
 18730 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
 18731 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
 18732 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
 18733 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
 18734 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
 18735 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
 18736 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
 18737 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
 18738 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA

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18739 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18740 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18741 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18742 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18743 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18744 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18745 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18746 % \dashleftarrow (AmS)
18747 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18748 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18749 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18750 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18751 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
18752 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18753 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18754 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow
(MnSymbol)
18755 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18756 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18757 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18758 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18759 % \downuparrows (MnSymbol)
18760 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18761 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18762 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18763 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18764 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18765 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
18766 \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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18767 % U+2200 FOR ALL; forall; \forall (LaTeX)
18768 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18769 % U+2201 COMPLEMENT; \complement (AmS)
18770 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18771 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18772 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18773 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18774 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18775 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18776 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18777 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18778 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18779 %* \textemptyset -> \varnothing (AmS)
18780 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18781 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18782 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18783 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18784 % U+2208 ELEMENT OF; element; \in (LaTeX)
18785 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18786 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18787 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18788 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18789 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A

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18790 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18791 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18792 %* \textni -> \owns (mathabx)
18793 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18794 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18795 %* \textnotowner -> \notni (txfonts/pxfonts)
18796 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18797 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18798 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18799 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18800 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18801 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18802 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18803 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18804 % U+2212 MINUS SIGN; minus
18805 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18806 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18807 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18808 % U+2214 DOT PLUS; \dotplus (AmS)
18809 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18810 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18811 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18812 % \DividesNot (marvosym)
18813 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18814 % U+2216 SET MINUS; \setminus (LaTeX)
18815 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18816 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18817 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18818 % U+2218 RING OPERATOR; \circ (LaTeX)
18819 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18820 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18821 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18822 % U+221A SQUARE ROOT; radical
18823 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18824 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18825 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18826 %* \textpropto -> \varpropto (wasysym)
18827 % U+221E INFINITY; infinity; \infty (LaTeX)
18828 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18829 % U+2220 ANGLE; angle; \angle (LaTeX)
18830 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18831 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18832 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18833 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18834 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18835 %* \textsphericalangle -> \varangle (wasysym)
18836 %* \textsphericalangle -> \Anglesign (marvosym)
18837 %* \textsphericalangle -> \AngleSign (marvosym)
18838 % U+2223 DIVIDES; divides; \mid (LaTeX)
18839 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18840 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18841 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18842 %* \textnmid -> \notdivides (mathabx)
18843 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18844 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18845 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18846 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226

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18847 %* \textnparallel -> nUpdownline (MnSymbol)
18848 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18849 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18850 % \owedge (stmaryrd)
18851 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18852 %* \textowedge -> \varowedge (stmaryrd)
18853 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18854 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18855 % \ovee (stmaryrd)
18856 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18857 %* \textovee -> \varovee (stmaryrd)
18858 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18859 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18860 % U+222A UNION; union; \cup (LaTeX)
18861 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18862 % U+222B INTEGRAL; integral; \int (LaTeX)
18863 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18864 %* \textint -> \varint (wasysym)
18865 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18866 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18867 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18868 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18869 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18870 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18871 %* \textoint -> \varoint (wasysym)
18872 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18873 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18874 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18875 % \ointclockwise (txfonts/pxfonts)
18876 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18877 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18878 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18879 % U+2234 THEREFORE; therefore; \therefore (AmS)
18880 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18881 %* \texttherefore -> uptherefore (MnSymbol)
18882 % U+2235 BECAUSE; because; \because (AmS)
18883 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18884 %* \textbecause -> \downtherefore (MnSymbol)
18885 % U+2236 RATIO; \vdotdot (MnSymbol)
18886 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18887 % U+2237 PROPORTION; \squaredots (MnSymbol)
18888 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18889 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18890 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18891 %* \textdotminus -> \textdotdiv (mathabx)
18892 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18893 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18894 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18895 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18896 %* \textsim -> \AC (wasysym)
18897 % U+223D REVERSED TILDE; reverseditilde; \backsim (AmS)
18898 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18899 % \nbacksim (txfonts/pxfonts)
18900 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18901 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18902 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240

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18903 %* \textwr -> \wreath (MnSymbol)
18904 % U+2241 NOT TILDE; \nsim (AmS)
18905 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18906 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18907 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18908 % \neqsim (MnSymbol)
18909 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18910 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18911 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18912 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18913 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18914 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18915 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18916 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18917 % \ncong (AmS)
18918 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18919 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18920 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18921 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18922 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18923 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18924 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18925 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18926 % \napproxeq (txfonts/pxfonts)
18927 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18928 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18929 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18930 %* \texttriplesim -> \VHF (wasysym)
18931 % \ntriplesim (MnSymbol)
18932 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18933 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18934 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18935 % \nbackcong (MnSymbol)
18936 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18937 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18938 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18939 % \nasymp (txfonts/pxfonts)
18940 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18941 %* \textnasymp -> \notasym (mathabx)
18942 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18943 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18944 % \nBumpeq (txfonts/pxfonts)
18945 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18946 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18947 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18948 % \nbumpeq (txfonts/pxfonts)
18949 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18950 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18951 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18952 % \ndoteq (MnSymbol)
18953 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18954 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18955 % \doteqdot (AmS)
18956 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18957 %* \textdoteqdot -> \Doteq (MnSymbol)
18958 % \nDoteq (MnSymbol)

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18959 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18960 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
      qualorimage;
18961 % \fallingdotseq (AmS)
18962 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
18963 % \nfallingdotseq (MnSymbol)
18964 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18965 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
      matelyequal;
18966 % \risingdotseq (AmS)
18967 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
18968 % \nrisingdoteq (MnSymbol)
18969 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18970 % U+2254 COLON EQUALS; \colonequals (colonequals)
18971 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18972 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18973 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18974 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18975 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18976 % \neqcirc (MnSymbol)
18977 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18978 % U+2257 RING EQUAL TO; \circeq (AmS)
18979 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18980 % \ncirceq (MnSymbol)
18981 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18982 % U+2259 ESTIMATES; \hateq (MnSymbol)
18983 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18984 %* \texthateq -> \corresponds (mathabx)
18985 %* \texthateq -> \Corresponds (marvosym)
18986 % \nhateq (MnSymbol)
18987 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18988 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18989 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18990 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18991 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18992 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18993 %* \textneq -> \nequal (MnSymbol)
18994 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18995 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18996 %* \textequiv -> \Congruent (marvosym)
18997 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18998 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18999 %* \textnequiv -> \NotCongruent (marvosym)
19000 %* \textnequiv -> \notequiv (mathabx)
19001 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
19002 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
19003 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
19004 %* \textleq -> \LessOrEqual (marvosym)
19005 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
19006 % \ge (LaTeX), \geq (LaTeX)
19007 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
19008 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
19009 %* \textgeq -> \LargerOrEqual (marvosym)
19010 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
19011 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
19012 % \nleqq (txfonts/pxfonts)
19013 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338

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19014 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
 19015 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 19016 % \ngeqq (txfonts/pxfonts)
 19017 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19018 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19019 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19020 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19021 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19022 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
 19023 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19024 % \nll (txfonts/pxfonts)
 19025 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19026 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
 19027 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19028 % \ngg (txfonts/pxfonts)
 19029 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19030 % U+226C BETWEEN; \between (AmS)
 19031 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19032 % U+226E NOT LESS-THAN; notless; \nless (AmS)
 19033 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19034 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
 19035 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19036 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
 19037 % \nleq (AmS)
 19038 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19039 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
 19040 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19041 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
 19042 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
 19043 %* \textlessim -> \apprle (wasysym)
 19044 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
 19045 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
 19046 %* \textgtrsim -> \apprge (wasysym)
 19047 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
 19048 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
 19049 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
 19050 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
 19051 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
 19052 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
 19053 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
 19054 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
 19055 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
 19056 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
 19057 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
 19058 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
 19059 % U+227A PRECEDES; precedes; \prec (LaTeX)
 19060 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
 19061 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
 19062 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
 19063 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
 19064 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C

19065 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
 19066 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
 19067 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
 19068 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
 19069 % \nprecsim (txfonts/pxfonts)
 19070 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
 19071 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
 19072 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
 19073 % \nsuccsim (txfonts/pxfonts)
 19074 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
 19075 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
 19076 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
 19077 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
 19078 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
 19079 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
 19080 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
 19081 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
 19082 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
 19083 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
 19084 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
 19085 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
 19086 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
 19087 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
 19088 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
 19089 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
 19090 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
 19091 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
 19092 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
 19093 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
 19094 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
 19095 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
 19096 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
 19097 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
 19098 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
 19099 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
 19100 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
 19101 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
 19102 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
 19103 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
 19104 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
 19105 % \nsqsubset (txfonts/pxfonts)
 19106 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
 19107 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
 19108 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
 19109 % \nsqsupset (txfonts/pxfonts)
 19110 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
 19111 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
 19112 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
 19113 % \nsqsubseq (txfonts/pxfonts)
 19114 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
 19115 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
 19116 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
 19117 % \nsqsupseteq (txfonts/pxfonts)
 19118 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
 19119 % U+2293 SQUARE CAP; \sqcap (LaTeX)

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19120 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19121 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19122 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19123 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19124 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19125 %* \textoplus -> \varoplus (stmaryrd)
19126 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19127 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19128 %* \textominus -> \varominus (stmaryrd)
19129 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19130 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19131 %* \textotimes -> \varotimes (stmaryrd)
19132 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19133 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19134 %* \textoslash -> \varoslash (stmaryrd)
19135 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19136 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19137 %* \textodot -> \varodot (stmaryrd)
19138 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19139 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19140 %* \textcircledcirc -> \ocirc (mathabx)
19141 %* \textcircledcirc -> \varocircle (stmaryrd)
19142 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19143 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19144 %* \textcircledast -> \varoast (stmaryrd)
19145 %* \textcircledast -> \oasterisk (mathabx)
19146 % U+229D CIRCLED DASH; \circleddash (AmS)
19147 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19148 % U+229E SQUARED PLUS; \boxplus (AmS)
19149 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19150 % U+229F SQUARED MINUS; \boxminus (AmS)
19151 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19152 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19153 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19154 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19155 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19156 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19157 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19158 %* \textvdash -> \rightvdash (MnSymbol)
19159 % U+22A3 LEFT TACK; \lhd; \dashv (LaTeX)
19160 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19161 %* \textdashv -> \leftvdash (MnSymbol)
19162 % \ndashv (mathabx)
19163 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19164 %* \textndashv -> \nleftvdash (MnSymbol)
19165 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
19166 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
19167 %* \texttop -> \downvdash (MnSymbol)
19168 % \ndownvdash (MnSymbol)
19169 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19170 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19171 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19172 %* \textbot -> \upvdash (MnSymbol)
19173 % \nupvdash (MnSymbol)
19174 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19175 %* \textnupvdash -> \nperp (MnSymbol)
19176 % U+22A8 TRUE; \vDash (AmS)

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19177 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19178 %* \textvDash -> \models (LaTeX)
19179 %* \textvDash -> \rightmodels (MnSymbol)
19180 % U+22A9 FORCES; \Vdash (AmS)
19181 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19182 %* \textVdash -> \rightVdash (MnSymbol)
19183 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19184 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19185 % \nVdash (mathabx)
19186 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19187 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19188 % \VDash (mathabx)
19189 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19190 %* \textVDash -> \rightModels (MnSymbol)
19191 % U+22AC DOES NOT PROVE; \nvDash (AmS)
19192 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19193 %* \textnvdash -> \nrighnvDash (MnSymbol)
19194 % U+22AD NOT TRUE; \nvDash (AmS)
19195 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19196 %* \textnvDash -> \nrighmodels (MnSymbol)
19197 %* \textnvDash -> \nmodels (MnSymbol)
19198 % U+22AE DOES NOT FORCE; \nDash (txfonts/pxfonts)
19199 \DeclareTextCommand{\textnDash}{PU}{\9042\256}%* U+22AE
19200 %* \textnDash -> \nrighDash (MnSymbol)
19201 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
19202 % STILE; \nVDash (AmS)
19202 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19203 %* \textnVDash -> \nrighModels (MnSymbol)
19204 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19205 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19206 %* \textlhd -> \lessclosed (MnSymbol)
19207 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19208 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19209 %* \textrhd -> \gtrclosed (MnSymbol)
19210 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19211 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19212 %* \textunlhd -> \leqclosed (MnSymbol)
19213 %* \textunlhd -> \trianglelefteq (MnSymbol)
19214 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
19215 % texsym, ...)
19215 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19216 %* \textunrhd -> \geqclosed (MnSymbol)
19217 %* \textunrhd -> \trianglerighteq (MnSymbol)
19218 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19219 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19220 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19221 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19222 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19223 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19224 % U+22BB XOR; \veebar (AmS)
19225 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19226 % U+22BC NAND; \barwedge (mathabx)
19227 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19228 % U+22C6 STAR OPERATOR; \star (LaTeX)
19229 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19230 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19231 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7

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19232 % U+22C8 BOWTIE; \bowtie (LaTeX)
19233 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19234 %* \textbowtie -> \Bowtie (wasysym)
19235 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19236 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19237 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19238 % \rtimes (AmS)
19239 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19240 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19241 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19242 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19243 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19244 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19245 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19246 % \nbacksimeq (txfonts/pxfonts)
19247 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19248 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19249 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19250 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19251 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19252 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19253 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19254 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19255 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19256 % \nSubset (txfonts/pxfonts)
19257 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19258 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19259 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19260 % \nSupset (txfonts/pxfonts)
19261 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19262 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19263 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19264 %* \textCap -> \doublecap (mathabx)
19265 % U+22D3 DOUBLE UNION; \Cup (AmS)
19266 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19267 %* \textCup -> \doublecup (mathabx)
19268 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19269 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19270 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19271 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19272 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19273 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19274 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19275 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19276 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19277 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19278 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
19279 % \lesseqgtr (AmS)
19280 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19281 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
19282 % \gtreqless (AmS)
19283 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19284 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19285 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19286 % \ncurlyeqprec (mathabx)
19287 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19288 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)

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19289 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19290 % \ncurlyeqsucc (mathabx)
19291 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19292 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19293 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19294 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19295 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19296 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19297 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19298 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19299 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19300 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19301 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19302 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19303 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19304 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19305 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19306 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19307 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19308 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19309 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19310 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19311 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19312 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19313 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19314 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19315 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19316 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19317 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)
19318 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19319 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19320 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19321 % \ntrianglelefteq (AmS)
19322 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19323 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19324 % \ntrianglerighteq (AmS)
19325 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19326 %* \textntrianglerighteq -> \textngeqclosed
19327 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
19328 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19329 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19330 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19331 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19332 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19333 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19334 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19335 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19336 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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51.2.23 Miscellaneous Technical: U+2300 to U+23FF

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19337 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19338 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19339 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)

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19340 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19341 % U+2311 SQUARE LOZENGE; \wasylounge (wasysym)
19342 \DeclareTextCommand{\textwasylounge}{PU}{\9043\021}%* U+2311
19343 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19344 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19345 % U+231A WATCH; \clock (wasysym)
19346 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19347 %* \textclock -> \Clocklogo (marvosym)
19348 %* \textclock -> \ClockLogo (marvosym)
19349 % U+231C TOP LEFT CORNER; \ulcorner (AMS)
19350 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19351 % U+231D TOP RIGHT CORNER; \urcorner (AMS)
19352 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19353 % U+231E BOTTOM LEFT CORNER; \llcorner (AMS)
19354 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19355 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AMS)
19356 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19357 % U+2322 FROWN; \frown (LaTeX)
19358 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19359 % U+2323 SMILE; \smile (LaTeX)
19360 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19361 % U+2328 KEYBOARD; \Keyboard (marvosym)
19362 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19363 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19364 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19365 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19366 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
19367 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19368 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19369 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19370 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19371 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19372 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
19373 %* \textstmaryrdbaro -> \baro (stmaryrd)
19374 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19375 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19376 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19377 % \notbackslash (wasysym)
19378 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19379 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
19380 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19381 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19382 % \APLleftarrowbox (wasysym)
19383 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
19384 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
19385 % \APLrightarrowbox (wasysym)
19386 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
19387 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
19388 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
19389 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
19390 % \APLdownarrowbox (wasysym)
19391 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
19392 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
19393 % \APLinput (wasysym)

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19394 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19395 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19396 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19397 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19398 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19399 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19400 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19401 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19402 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19403 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19404 % \ForwardToIndex (marvosym)
 19405 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19406 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19407 % \RewindToIndex (marvosym)
 19408 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19409 % U+2422 BLANK SYMBOL
 19410 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19411 % U+2423 OPEN BOX; blank
 19412 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19413 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19414 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19415 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19416 % U+2460 CIRCLED DIGIT ONE; onecircle
 19417 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19418 % U+2461 CIRCLED DIGIT TWO; twocircle
 19419 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19420 % U+2462 CIRCLED DIGIT THREE; threecircle
 19421 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19422 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19423 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19424 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19425 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19426 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19427 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19428 % U+2466 CIRCLED DIGIT SEVEN; sevendcircle
 19429 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19430 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19431 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19432 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19433 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19434 % U+2469 CIRCLED NUMBER TEN; tencircle
 19435 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19436 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19437 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19438 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19439 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19440 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19441 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19442 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle

19443 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19444 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19445 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19446 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19447 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19448 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19449 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19450 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19451 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19452 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19453 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19454 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19455 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19456 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19457 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19458 % \CircledA (marvosym)
19459 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19460 %* \textCircledA -> \CleaningA
19461 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19462 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19463 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19464 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19465 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19466 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19467 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19468 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19469 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19470 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19471 % \CleaningF (marvosym)
19472 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19473 % \CleaningFF (marvosym)
19474 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19475 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
19476 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
19477 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
19478 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
19479 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
19480 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
19481 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
19482 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
19483 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
19484 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
19485 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
19486 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
19487 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
19488 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
19489 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
19490 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
19491 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
19492 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
19493 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
19494 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
19495 % \CleaningP (marvosym)
19496 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
19497 % \CleaningPP (marvosym)
19498 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
19499 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle

19500 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19501 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19502 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19503 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19504 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19505 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19506 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19507 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19508 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19509 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19510 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19511 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19512 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19513 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19514 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19515 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19516 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19517 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19518 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19519 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19520 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19521 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19522 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19523 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19524 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19525 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19526 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19527 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19528 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19529 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19530 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19531 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19532 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19533 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19534 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19535 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19536 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19537 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19538 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19539 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19540 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19541 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19543 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19545 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19547 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19548 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19549 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19550 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19551 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19552 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19553 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19554 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19555 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19556 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2

19557 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19558 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19559 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19561 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19563 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19565 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19567 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19569 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19571 % U+24EA CIRCLED DIGIT ZERO
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19573 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19574 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19575 %* \textCuttingLine -> \Kutline (marvosym)
 19576 %* \textCuttingLine -> \CutLine (marvosym)
 19577 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19578 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19579 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19580 %* \textUParrow -> \MoveUp (marvosym)
 19581 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19582 % \bigtriangleup (LaTeX)
 19583 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19584 %* \textbigtriangleup -> \APLup (wasysym)
 19585 %* \textbigtriangleup -> \Bleech (marvosym)
 19586 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19587 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19588 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19589 % whiterightpointingtriangle; \triangleright (LaTeX)
 19590 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19591 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19592 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19593 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19594 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19595 %* \textDOWNarrow -> \MoveDown (marvosym)
 19596 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
 angle;
 19597 % \bigtriangledown (LaTeX)
 19598 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
 19599 %* \textbigtriangledown -> \APLdown (wasysym)
 19600 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
 19601 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
 19602 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
 striction);
 19603 % whiteleftpointingtriangle; \triangleleft (LaTeX)
 19604 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
 19605 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)

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19606 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19607 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19608 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19609 %* \textdiamond -> \Diamond (wasysym)
19610 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19611 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19612 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19613 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19614 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19615 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19616 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19617 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19618 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19619 % \boxbar (stmaryrd)
19620 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19621 % U+25EF LARGE CIRCLE; largecircle
19622 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19623 %* \textbigcircle -> \varbigcirc (stmaryrd)
19624 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19625 % U+2601 CLOUD; \Cloud (ifsym)
19626 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19627 % U+2605 BLACK STAR; \FiveStar (bbding)
19628 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19629 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19630 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19631 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19632 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19633 %* \textPhone -> \Telefon (marvosym)
19634 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19635 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19636 %* \textboxempty -> \Box (wasysym)
19637 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19638 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19639 %* \textCheckedbox -> \CheckedBox (marvosym)
19640 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19641 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19642 %* \textCrossedbox -> \XBox (wasysym)
19643 %* \textCrossedbox -> \CrossedBox (marvosym)
19644 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19645 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19646 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19647 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19648 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
19649 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19650 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19651 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19652 %* \textHandLeft -> \rightpointleft (fourier)
19653 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19654 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19655 %* \textHandRight -> \leftpointright (fourier)
19656 %* \textHandRight -> \PointingHand (marvosym)
19657 %* \textHandRight -> \Pointinghand (marvosym)
19658 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19659 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19660 %* \textRadioactivity -> \Radiation (ifsym)

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19661 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19662 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19663 % U+2625 ANKH; \Ankh (marvosym)
19664 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19665 % U+262F YIN YANG; \YinYang (marvosym)
19666 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19667 %* \textYinYang -> \Yinyang (marvosym)
19668 %* \textYinYang -> \YingYang (marvosym)
19669 %* \textYinYang -> \Yingyang (marvosym)
19670 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19671 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19672 %* \textfrownie -> \Frowny (marvosym)
19673 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19674 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19675 %* \textsmiley -> \Smiley (marvosym)
19676 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19677 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19678 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19679 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19680 %* \textsun -> \Sun (marvosym)
19681 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19682 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19683 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19684 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19685 % U+263F MERCURY; \mercury (wasysym)
19686 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19687 %* \textmercury -> \Mercury (marvosym)
19688 % U+2640 FEMALE SIGN; female; \female (wasysym)
19689 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19690 %* \textPUfemale -> \textfemale (tipx)
19691 %* \textPUfemale -> \female (wasysym)
19692 %* \textPUfemale -> \venus (wasysym)
19693 %* \textPUfemale -> \Venus (marvosym)
19694 %* \textPUfemale -> \Female (marvosym)
19695 % U+2641 EARTH; \earth (wasysym)
19696 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19697 %* \textearth -> \Earth (marvosym)
19698 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19699 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19700 %* \textmale -> \mars (wasysym)
19701 %* \textmale -> \Mars (marvosym)
19702 %* \textmale -> \Male (marvosym)
19703 % U+2643 JUPITER; \jupiter (wasysym)
19704 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19705 %* \textjupiter -> \Jupiter (marvosym)
19706 % U+2644 SATURN; \saturn (wasysym)
19707 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19708 %* \textsaturn -> \Saturn (marvosym)
19709 % U+2645 URANUS; \uranus (wasysym)
19710 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19711 %* \texturanus -> \Uranus (marvosym)
19712 % U+2646 NEPTUNE; \neptune (wasysym)
19713 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19714 %* \textneptune -> \Neptune (marvosym)
19715 % U+2647 PLUTO; \pluto (wasysym)
19716 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19717 %* \textpluto -> \Pluto (marvosym)

19718 % U+2648 ARIES; \aries (wasysym)
 19719 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19720 %* \textaries -> \Aries (marvosym)
 19721 % U+2649 TAURUS; \taurus (wasysym)
 19722 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19723 %* \texttaurus -> \Taurus (marvosym)
 19724 % U+264A GEMINI; \gemini (wasysym)
 19725 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19726 %* \textgemini -> \Gemini (marvosym)
 19727 % U+264B CANCER; \cancer (wasysym)
 19728 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19729 %* \textcancer -> \Cancer (marvosym)
 19730 % U+264C LEO; \leo (wasysym)
 19731 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19732 %* \textleo -> \Leo (marvosym)
 19733 % U+264D VIRGO; \virgo (wasysym)
 19734 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19735 %* \textvirgo -> \Virgo (marvosym)
 19736 % U+264E LIBRA; \libra (wasysym)
 19737 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19738 %* \textlibra -> \Libra (marvosym)
 19739 % U+264F SCORPIO; \scorpio (wasysym)
 19740 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19741 %* \textscorpio -> \Scorpio (marvosym)
 19742 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19743 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19744 %* \textsagittarius -> \Sagittarius (marvosym)
 19745 % U+2651 CAPRICORN; \capricornus (wasysym)
 19746 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19747 %* \textcapricornus -> \Capricorn (marvosym)
 19748 % U+2652 AQUARIUS; \aquarius (wasysym)
 19749 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19750 %* \textaquarius -> \Aquarius (marvosym)
 19751 % U+2653 PISCES; \pisces (wasysym)
 19752 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
 19753 %* \textpisces -> \Pisces (marvosym)
 19754 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
 19755 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
 19756 %* \textspadesuitblack -> \spadesuit (MnSymbol)
 19757 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
 19758 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
 19759 %* \textheartsuitwhite -> \Heart (marvosym)
 19760 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
 19761 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
 19762 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
 19763 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
 19764 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
 19765 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
 19766 %* \textclubsuitblack -> \clubsuit (MnSymbol)
 19767 % U+2664 WHITE SPADE SUIT; spadesuitwhite
 19768 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
 19769 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
 19770 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
 19771 % U+2666 BLACK DIAMOND SUIT; diamond
 19772 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
 19773 % U+2667 WHITE CLUB SUIT; clubsuitwhite
 19774 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667

19775 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19776 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19777 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19778 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19779 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19780 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19781 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19782 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19783 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19784 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19785 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19786 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19787 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19788 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19789 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19790 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19791 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19792 %* \textrecycle -> \Recycling (marvosym)
19793 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19794 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19795 % U+2691 BLACK FLAG; \Flag (ifsym)
19796 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19797 %* \textFlag -> \VarFlag (ifsym)
19798 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19799 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19800 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19801 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19802 %* \textdsmilitary -> \textxswup (fourier)
19803 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19804 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19805 % U+2696 SCALES; \dsjuridical (dictsym)
19806 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19807 % U+2697 ALEMBIC; \dschemical (dictsym)
19808 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19809 % U+2698 FLOWER; \dsbiological (dictsym)
19810 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19811 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19812 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19813 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19814 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19815 % U+26A0 WARNING SIGN; \danger (fourier)
19816 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19817 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19818 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19819 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19820 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
19821 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
19822 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19823 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19824 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
19825 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
19826 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
19827 % U+26AD MARRIAGE SYMBOL
19828 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
19829 % U+26AE DIVORCE SYMBOL

19830 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19831 % U+26B2 NEUTER; \textunconfemale (tipx)
 19832 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
 19833 %* \textPUunconfemale -> \textunconfemale (tipx)
 19834 % U+26B9 SEXTILE; \hexstar (wasysym)
 19835 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19836 % U+26BD SOCCER BALL; \Football (marvosym)
 19837 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19838 %* \textSoccerBall -> \Football (marvosym)
 19839 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19840 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19841 % U+26C6 RAIN; \Rain (ifsym)
 19842 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19843 % U+26D4 NO ENTRY; \noway (fourier)
 19844 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19845 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19846 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19847 % U+26FA TENT; \Tent (ifsym)
 19848 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19849 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
 19850 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19851 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19852 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19853 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19854 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19855 %* \textScissorRight -> \RightScissors (marvosym)
 19856 %* \textScissorRight -> \Leftscissors (marvosym)
 19857 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19858 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19859 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19860 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19861 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19862 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19863 % U+2707 TAPE DRIVE; \Tape (bding)
 19864 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19865 % U+2708 AIRPLANE; \Plane (bding)
 19866 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19867 % U+2709 ENVELOPE; \Envelope (bding),
 19868 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19869 %* \textEnvelope -> \Letter (marvosym)
 19870 % U+270C VICTORY HAND; \Peace (bding)
 19871 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19872 % U+270D WRITING HAND; \WritingHand (marvosym)
 19873 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19874 %* \textWritingHand -> \Writinghand (marvosym)
 19875 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19876 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19877 % U+270F PENCIL; \PencilRight (bding)
 19878 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19879 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19880 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19881 % U+2711 WHITE NIB; \NibRight (bding)
 19882 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19883 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19884 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712

19885 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19886 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19887 %* \textCheckmark -> \checkmark (MnSymbol)
 19888 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19889 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19890 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19891 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19892 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19893 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19894 % U+2717 BALLOT X; \XSolidBrush (bding)
 19895 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19896 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19897 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19898 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19899 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19900 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19901 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19902 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19903 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19904 % U+271D LATIN CROSS; \Cross (bding)
 19905 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19906 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19907 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19908 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19909 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19910 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19911 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19912 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19913 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19914 %* \textDavidStar -> \davidstar (wasysym)
 19915 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19916 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19917 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19918 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19919 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19920 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19921 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19922 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19923 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19924 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19925 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19926 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19927 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19928 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19929 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19930 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19931 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19932 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19933 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19934 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19935 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19936 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19937 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19938 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19939 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19940 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730

19941 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19942 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19943 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19944 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19945 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19946 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19947 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19948 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19949 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19950 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19951 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19952 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19953 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19954 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19955 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19956 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19957 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19958 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19959 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19960 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19961 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19962 % \SixFlowerOpenCenter (bding)
 19963 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19964 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19965 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19966 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19967 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19968 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19969 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19970 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19971 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19972 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19973 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19974 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19975 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19976 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19977 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19978 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19979 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19980 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19981 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19982 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19983 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19984 % U+2747 SPARKLE; \Sparkle (bding)
 19985 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19986 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19987 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19988 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19989 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19990 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

19991 % \EightFlowerPetalRemoved (bding)
 19992 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19993 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19994 % \EightAsterisk (bding)
 19995 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19996 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19997 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19998 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19999 % \SquareShadowBottomRight (bding)
 20000 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20001 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20002 % \SquareShadowTopRight (bding)
 20003 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20004 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20005 % \SquareCastShadowBottomRight (bding)
 20006 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20007 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20008 % \SquareCastShadowTopRight (bding)
 20009 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20010 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 20011 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20012 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20013 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20014 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20015 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20016 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20017 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20018 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20019 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20020 % \notperp (mathabx)
 20021 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20022 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20023 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20024 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20025 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20026 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20027 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20028 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20029 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20030 %* \textlbrackdbl -> \lbracket (stmaryrd)
 20031 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20032 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20033 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20034 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20035 % \circlearrowleft (AmS)
 20036 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20037 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20038 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20039 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20040 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20041 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20042 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6

20043 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 20044 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
 20045 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20046 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20047 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 20048 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20049 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
 20050 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
 20051 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20052 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20053 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmapsfrom (stmaryrd)
 20054 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20055 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmapsto (stmaryrd)
 20056 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20057 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSymbol)
 20058 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20059 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 20060 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20061 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20062 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20063 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknarrow (MnSymbol)
 20064 \DeclareTextCommand{\textrhooknarrow}{PU}{\9051\044}%* U+2924
 20065 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20066 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20067 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20068 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20069 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20070 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20071 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20072 % \rcurvearrowne (MnSymbol)
 20073 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20074 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWNWARDS;
 20075 % \lcurvearrowse (MnSymbol)
 20076 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20077 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFTWARDS;
 20078 % \lcurvearrowsw (MnSymbol)
 20079 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20080 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHTWARDS;
 20081 % \rcurvearrowse (MnSymbol)
 20082 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 20083 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (MnSymbol)
 20084 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20085 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20086 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20087 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20088 % \rcurvearrowdown (MnSymbol)
 20089 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939

20090 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20091 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20092 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
 20093 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20094 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20095 % \rcurvearrowright (MnSymbol)
 20096 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20097 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
 20098 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20099 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
 20100 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20101 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20102 % \updownharpoonrightleft (MnSymbol)
 20103 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20104 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20105 % \updownharpoonleftright (MnSymbol)
 20106 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20107 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20108 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20109 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20110 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20111 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20112 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20113 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 20114 % WARDS HARPOON
 20115 \DeclareTextCommand{\textrightharpoons}{PU}{\9051\144}%* U+2964
 20116 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 20117 % WARDS HARPOON
 20118 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20119 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20120 % \leftbarharpoon (mathabx)
 20121 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20122 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20123 % LONG DASH; \barleftharpoon (mathabx)
 20124 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20125 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20126 % LONG DASH; \rightbarharpoon (mathabx)
 20127 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20128 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20129 % LONG DASH; \barrightharpoon (mathabx)
 20130 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20131 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 20132 % WARDS HARPOON
 20133 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20134 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 20135 % WARDS HARPOON
 20136 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20137 % U+297F DOWN FISH TAIL
 20138 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20139 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \llparenthesis (stmaryrd)
 20140 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 20141 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20142 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20143 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20144 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20145 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20146 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20147 %* \textobar -> \textvarobar (stmaryrd)
 20148 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20149 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20150 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20151 %* \textobslash -> \obackslash (mathabx)
 20152 %* \textobslash -> \varobslash (stmaryrd)
 20153 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20154 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20155 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20156 %* \textobot -> \odplus (ulsy)
 20157 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20158 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20159 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20160 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20161 %* \textolessthan -> \varolessthan (stmaryrd)
 20162 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20163 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20164 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20165 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20166 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20167 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20168 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20169 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 20170 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20171 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20172 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20173 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20174 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20175 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20176 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20177 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20178 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20179 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20180 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20181 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20182 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20183 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20184 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20185 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20186 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20187 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20188 % pxfonts, wasysym)
 20189 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20190 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20191 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F

20192 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20193 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20194 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20195 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20196 %* \textminusdot -> \divdot (mathabx)
 20197 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20198 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20199 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20200 % \dtimes (mathdesign)
 20201 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20202 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20203 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20204 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20205 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20206 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20207 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20208 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20209 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20210 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20211 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20212 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20213 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20214 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20215 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20216 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20217 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20218 %* \textdoublevee -> \merge (stmaryrd)
 20219 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20220 % \doublebarwedge (AmS)
 20221 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20222 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20223 % \veedoublebar (mahtabx)
 20224 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20225 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20226 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20227 % \neqdot (MnSymbol)
 20228 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20229 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20230 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20231 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20232 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20233 % \nleqslant (txfonts/pxfonts)
 20234 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20235 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20236 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20237 % \ngeqslant (txfonts/pxfonts)
 20238 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20239 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20240 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20241 % \nlessapprox (txfonts/pxfonts)
 20242 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20243 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20244 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20245 % \ngtrapprox (txfonts/pxfonts)
 20246 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20247 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20248 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87

20249 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20250 % \gneq (AmS)
 20251 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20252 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20253 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20254 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20255 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20256 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
 20257 % \lesseqqgtr (AmS)
 20258 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 20259 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
 20260 % \gtreqqless (AmS)
 20261 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 20262 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20263 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20264 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20265 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20266 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20267 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20268 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20269 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20270 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-Symbol)
 20271 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20272 % \npreceq (txfonts/pxfonts)
 20273 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20274 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-Symbol)
 20275 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20276 % \nsucceq (txfonts/pxfonts)
 20277 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20278 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq (mathabx)
 20279 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20280 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
 20281 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20282 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20283 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20284 % \npreceqq (txfonts/pxfonts)
 20285 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20286 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20287 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20288 % \nsucceqq (txfonts/pxfonts)
 20289 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20290 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20291 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20292 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20293 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20294 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20295 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20296 % \nprecapprox (txfonts/pxfonts)
 20297 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20298 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20299 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20300 % \nsuccapprox (txfonts/pxfonts)
 20301 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338

20302 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
 20303 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20304 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
 20305 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20306 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20307 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20308 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20309 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20310 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20311 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20312 % \nsupseteqq (mathabx)
 20313 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20314 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20315 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20316 %* \textdashV -> \leftVdash (MnSymbol)
 20317 % \ndashV (mathabx)
 20318 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20319 %* \textndashV -> \nleftVdash (MnSymbol)
 20320 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20321 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20322 %* \textDashv -> \leftmodels (MnSymbol)
 20323 % \nDashv (mathabx)
 20324 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20325 %* \textnDashv -> \nleftmodels (MnSymbol)
 20326 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20327 % \DashV (mathabx)
 20328 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20329 %* \textDashV -> \leftModels (MnSymbol)
 20330 % \nDashV (mathabx)
 20331 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20332 %* \textnDashV -> \nleftModels (MnSymbol)
 20333 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20334 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20335 % \ndownmodels (MnSymbol)
 20336 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20337 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20338 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20339 % \nupmodels (MnSymbol)
 20340 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20341 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20342 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20343 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20344 % \interleave (stmaryrd)
 20345 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20346 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
 20347 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
 20348 %* \textslash -> \varparallel (txfonts/pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20349 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20350 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20351 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20352 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20353 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20354 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20355 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20356 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20357 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20358 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20359 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20360 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20361 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20362 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20363 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20364 % \textdownstep (tipa)
 20365 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20366 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20367 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20368 %* \textPUheng -> \textheng (tipx)
 20369 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20370 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20371 %* \textPULhookfour -> \textlhookfour (tipx)
 20372 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20373 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20374 %* \textPUscf -> \textscf (tipx)
 20375 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20376 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20377 %* \textPUaolig -> \textaoilig (tipx)
 20378 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20379 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20380 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20381 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20382 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20383 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20384 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20385 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20386 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20387 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20388 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20389 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20390 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20391 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20392 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20393 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20394 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20395 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20396 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20397 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20398 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20399 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D

20400 %* \textfullnote -> \Ganz (harmony)
 20401 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20402 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20403 %* \texthalfnote -> \Halb (harmony)
 20404 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20405 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20406 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20407 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20408 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20409 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20410 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20411 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20412 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20413 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20414 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20415 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20416 % U+1F468 MAN; \ManFace (marvosym)
 20417 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20418 % U+1F469 WOMAN; \WomanFace (marvosym)
 20419 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20420 %* \textWomanFace -> \Womanface (marvosym)
 20421 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20422 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20423 %* \textFax -> \Faxmachine (marvosym)
 20424 % U+1F525 FIRE; \Fire (ifsym)
 20425 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20426 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20427 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20428 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20429 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20430 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20431 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20432 \DeclareTextCommand{\SS}{PU}{SS}%
 20433 % \textcopyleft (textcomp)
 20434 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20435 % \ccnc (ccllicenses)
 20436 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20437 % \ccnd (ccllicenses)
 20438 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 20439 % \ccsa (ccllicenses)
 20440 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 20441 % \Info (marvosym, china2e)
 20442 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
 20443 % \CESign (marvosym)
 20444 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
 20445 %* \textCESign -> \CESign (marvosym)

51.2.46 Aliases

Aliases (german.sty)

20446 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
 20447 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%

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20448 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20449 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20450 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20451 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20452 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20453 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

Aliases (math names)

20454 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20455 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20456 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20457 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20458 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*

20459 </puenc>

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51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

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20460 <*puvnenc>

20461 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20462 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20463 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20464 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20465 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20466 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20467 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20468 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20469 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20470 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20471 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20472 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

20473 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20474 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20475 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
20476 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20477 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20478 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20479 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20480 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
20481 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20482 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20483 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20484 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20485 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
20486 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
20487 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
20488 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
20489 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
20490 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
20491 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
20492 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
20493 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
20494 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
20495 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
20496 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
20497 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5

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20498 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20499 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20500 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 20501 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20502 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20503 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20504 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20505 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 20506 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20507 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20508 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20509 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20510 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20511 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20512 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20513 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20514 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20515 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 20516 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20517 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20518 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20519 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20520 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 20521 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20522 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20523 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20524 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20525 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}% U+1EEB
 20526 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20527 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20528 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20529 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20530 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 20531 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20532 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20533 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20534 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20535 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}% U+00C0
 20536 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20537 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20538 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20539 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20540 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20541 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20542 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20543 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20544 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20545 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20546 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20547 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA A
 20548 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20549 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20550 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
 20551 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20552 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20553 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20554 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6

```

20555 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
20556 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
20557 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
20558 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
20559 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
20560 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
20561 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
20562 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
20563 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
20564 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
20565 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
20566 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
20567 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
20568 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
20569 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
20570 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
20571 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
20572 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
20573 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
20574 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
20575 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
20576 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20577 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20578 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20579 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20580 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
20581 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20582 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20583 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20584 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20585 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
20586 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20587 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20588 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20589 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20590 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
20591 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20592 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20593 (/puvnc)

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20594 (*puarenc)

20595 % U+0621;afii57409;ARABIC LETTER HAMZA
20596 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20597 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20598 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20599 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20600 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20601 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20602 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20603 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20604 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20605 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20606 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626

```

20607 % U+0627;afii57415;ARABIC LETTER ALEF
 20608 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20609 % U+0628;afii57416;ARABIC LETTER BEH
 20610 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20611 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20612 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20613 % U+062A;afii57418;ARABIC LETTER TEH
 20614 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20615 % U+062B;afii57419;ARABIC LETTER THEH
 20616 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20617 % U+062C;afii57420;ARABIC LETTER JEEM
 20618 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20619 % U+062D;afii57421;ARABIC LETTER HAH
 20620 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20621 % U+062E;afii57422;ARABIC LETTER KHAH
 20622 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20623 % U+062F;afii57423;ARABIC LETTER DAL
 20624 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20625 % U+0630;afii57424;ARABIC LETTER THAL
 20626 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20627 % U+0631;afii57425;ARABIC LETTER REH
 20628 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20629 % U+0632;afii57426;ARABIC LETTER ZAIN
 20630 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20631 % U+0633;afii57427;ARABIC LETTER SEEN
 20632 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20633 % U+0634;afii57428;ARABIC LETTER SHEEN
 20634 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20635 % U+0635;afii57429;ARABIC LETTER SAD
 20636 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20637 % U+0636;afii57430;ARABIC LETTER DAD
 20638 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20639 % U+0637;afii57431;ARABIC LETTER TAH
 20640 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20641 % U+0638;afii57432;ARABIC LETTER ZAH
 20642 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20643 % U+0639;afii57433;ARABIC LETTER AIN
 20644 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20645 % U+063A;afii57434;ARABIC LETTER GHAIN
 20646 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20647 % U+0640;afii57440;ARABIC TATWEEL
 20648 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20649 % U+0641;afii57441;ARABIC LETTER FEH
 20650 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20651 % U+0642;afii57442;ARABIC LETTER QAF
 20652 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20653 % U+0643;afii57443;ARABIC LETTER KAF
 20654 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20655 % U+0644;afii57444;ARABIC LETTER LAM
 20656 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20657 % U+0645;afii57445;ARABIC LETTER MEEM
 20658 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20659 % U+0646;afii57446;ARABIC LETTER NOON
 20660 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20661 % U+0647;afii57470;ARABIC LETTER HEH
 20662 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20663 % U+0648;afii57448;ARABIC LETTER WAW

20664 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20665 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20666 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20667 % U+064A;afii57450;ARABIC LETTER YEH
 20668 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20669 % U+064B;afii57451;ARABIC FATHATAN
 20670 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20671 % U+064C;afii57452;ARABIC DAMMATAN
 20672 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20673 % U+064D;afii57453;ARABIC KASRATAN
 20674 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20675 % U+064E;afii57454;ARABIC FATHA
 20676 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20677 % U+064F;afii57455;ARABIC DAMMA
 20678 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20679 % U+0650;afii57456;ARABIC KASRA
 20680 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20681 % U+0651;afii57457;ARABIC SHADDA
 20682 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20683 % U+0652;afii57458;ARABIC SUKUN
 20684 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20685 % U+067E ARABIC LETTER PEH; afii57506
 20686 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20687 % U+0686 ARABIC LETTER TCHEH; afii57507
 20688 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20689 % U+0698 ARABIC LETTER JEH; afii57508
 20690 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20691 % U+06A9 ARABIC LETTER KEHEH
 20692 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20693 % U+06AF ARABIC LETTER GAF; afii57509
 20694 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20695 % U+06CC ARABIC LETTER FARSI YEH
 20696 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20697 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20698 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20699 % U+200D ZERO WIDTH JOINER; afii301
 20700 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D

 20701 (/puarenc)
 20702 (*psdextra)
 20703 \Hy@VersionCheck{psdextra.def}
 20704 \newcommand*{\psdmapshortnames}{%
 20705 \let\MVPlus\textMVPlus
 20706 \let\MVComma\textMVComma
 20707 \let\MVMinus\textMVMinus
 20708 \let\MVPeriod\textMVPeriod
 20709 \let\MVDivision\textMVDivision
 20710 \let\MVZero\textMVZero
 20711 \let\MVOne\textMVOne
 20712 \let\MVTwo\textMVTwo
 20713 \let\MVThree\textMVThree
 20714 \let\MVFour\textMVFour
 20715 \let\MVFive\textMVFive
 20716 \let\MVSix\textMVSix
 20717 \let\MVSeven\textMVSeven

20718 \let\MVEight\textMVEight
 20719 \let\MVNNine\textMVNNine
 20720 \let\MVAt\textMVAt
 20721 \let\copyright\textcopyright
 20722 \let\twosuperior\texttwosuperior
 20723 \let\threesuperior\textthreesuperior
 20724 \let\onesuperior\textonesuperior
 20725 \let\Thorn\textThorn
 20726 \let\thorn\textthorn
 20727 \let\hbar\texthbar
 20728 \let\hausaB\texthausaB
 20729 \let\hausaD\texthausaD
 20730 \let\hausaK\texthausaK
 20731 \let\barl\textbarl
 20732 \let\inve\textinve
 20733 \let\slashc\textslashc
 20734 \let\scripta\textscripta
 20735 \let\openo\textopeno
 20736 \let\rtaild\textrtaild
 20737 \let\reve\textreve
 20738 \let\schwa\textschwa
 20739 \let\niepsilon\textniepsilon
 20740 \let\reveysion\textreveysion
 20741 \let\rhookreveysion\texthookreveysion
 20742 \let\scriptg\textscriptg
 20743 \let\scg\textscg
 20744 \let\ipagamma\textipagamma
 20745 \let\babygamma\textbabygamma
 20746 \let\bari\textbari
 20747 \let\niota\textniota
 20748 \let\sci\textsci
 20749 \let\scn\textscn
 20750 \let\niphi\textniphi
 20751 \let\longlegr\textlonglegr
 20752 \let\scr\textscr
 20753 \let\invscr\textinvscr
 20754 \let\esh\textesh
 20755 \let\baru\textbaru
 20756 \let\niupsilon\textniupsilon
 20757 \let\scriptv\textscriptv
 20758 \let\turnv\textturnv
 20759 \let\turnw\textturnw
 20760 \let\turny\textturny
 20761 \let\scy\textscy
 20762 \let\yogh\textyogh
 20763 \let\glotstop\textglotstop
 20764 \let\revglotstop\textrevglotstop
 20765 \let\invglotstop\textinvglotstop
 20766 \let\Gamma\textGamma
 20767 \let\Delta\textDelta
 20768 \let\Theta\textTheta
 20769 \let\Lambda\textLambda
 20770 \let\Xi\textXi
 20771 \let\Pi\textPi
 20772 \let\Sigma\textSigma
 20773 \let\Upsilon\textUpsilon
 20774 \let\Phi\textPhi

20775 \let\Psi\textPsi
 20776 \let\Omega\textOmega
 20777 \let\alpha\textalpha
 20778 \let\beta\textbeta
 20779 \let\gamma\textgamma
 20780 \let\delta\textdelta
 20781 \let\epsilon\textepsilon
 20782 \let\zeta\textzeta
 20783 \let\eta\texteta
 20784 \let\theta\texttheta
 20785 \let\iota\textiota
 20786 \let\kappa\textkappa
 20787 \let\lambda\textlambda
 20788 \let\mugreek\textmugreek
 20789 \let\nu\textnu
 20790 \let\xi\textxi
 20791 \let\pi\textpi
 20792 \let\rho\rho
 20793 \let\varsigma\textvarsigma
 20794 \let\sigma\textsigma
 20795 \let\tau\texttau
 20796 \let\upsilon\textupsilon
 20797 \let\phi\textphi
 20798 \let\chi\textchi
 20799 \let\psi\textpsi
 20800 \let\omega\textomega
 20801 \let\scd\textscd
 20802 \let\scu\textscu
 20803 \let\iinferior\textiinferior
 20804 \let\rinferior\extrinferior
 20805 \let\uinferior\textuinferior
 20806 \let\vinferior\textvinferior
 20807 \let\betainferior\textbetainferior
 20808 \let\gammainferior\textgammainferior
 20809 \let\rhoinferior\textrhoinferior
 20810 \let\phiinferior\textphiinferior
 20811 \let\chiinferior\textchiinferior
 20812 \let\barsci\textbarsci
 20813 \let\barp\textbarp
 20814 \let\barscu\textbarscu
 20815 \let\htrtaild\texthtrtaild
 20816 \let\dagger\textdagger
 20817 \let\bullet\textbullet
 20818 \let\hdotfor\texthdotfor
 20819 \let\prime\textprime
 20820 \let\second\textsecond
 20821 \let\third\textthird
 20822 \let\backprime\textbackprime
 20823 \let\lefttherefore\textlefttherefore
 20824 \let\fourth\textfourth
 20825 \let\diamonddots\textdiamonddots
 20826 \let\zerosuperior\textzerosuperior
 20827 \let\isuperior\textisuperior
 20828 \let\foursuperior\textfoursuperior
 20829 \let\fivesuperior\textfivesuperior
 20830 \let\sixsuperior\textsixsuperior
 20831 \let\sevensuperior\textsevensuperior

20832 \let\eightssuperior\texteightssuperior
 20833 \let\ninesuperior\textninesuperior
 20834 \let\plussuperior\textplussuperior
 20835 \let\minussuperior\textminussuperior
 20836 \let\equalsuperior\textequalsuperior
 20837 \let\parenleftssuperior\textparenleftssuperior
 20838 \let\parenrightssuperior\textparenrightssuperior
 20839 \let\NSSuperior\textNSSuperior
 20840 \let\zeroinferior\textzeroinferior
 20841 \let\oneinferior\textoneinferior
 20842 \let\twoinferior\texttwoinferior
 20843 \let\threeinferior\textthreeinferior
 20844 \let\fourinferior\textfourinferior
 20845 \let\fiveinferior\textfiveinferior
 20846 \let\sixinferior\textsixinferior
 20847 \let\seveninferior\textseveninferior
 20848 \let\eightinferior\texteightinferior
 20849 \let\nineinferior\textnineinferior
 20850 \let\plusinferior\textplusinferior
 20851 \let\minusinferior\textminusinferior
 20852 \let\equalsinferior\textequalsinferior
 20853 \let\parenleftinferior\textparenleftinferior
 20854 \let\parenrightinferior\textparenrightinferior
 20855 \let\ainferior\textainferior
 20856 \let\eginferior\texteginferior
 20857 \let\oinferior\textoinferior
 20858 \let\xinferior\textxinferior
 20859 \let\schwainferior\textschwainferior
 20860 \let\hinferior\texthinferior
 20861 \let\kinferior\textkinferior
 20862 \let\linferior\textlinferior
 20863 \let\minferior\textminferior
 20864 \let\ninferior\textninferior
 20865 \let\pinferior\textpinferior
 20866 \let\sinferior\textsinferior
 20867 \let\tinferior\texttinferior
 20868 \let\Deleatur\textDeleatur
 20869 \let\hslash\texthslash
 20870 \let\Im\textIm
 20871 \let\ell\textell
 20872 \let\wp\textwp
 20873 \let\Re\textRe
 20874 \let\mho\textmho
 20875 \let\riota\textriota
 20876 \let\Finv\textFinv
 20877 \let\aleph\textaleph
 20878 \let\beth\textbeth
 20879 \let\gimel\textgimel
 20880 \let\daleth\textdaleth
 20881 \let\xfax\textfax
 20882 \let\Game\textGame
 20883 \let\leftarrow\textleftarrow
 20884 \let\uparrow\textuparrow
 20885 \let\rightarrow\textrightarrow
 20886 \let\downarrow\textdownarrow
 20887 \let\leftrightarrow\textleftrightarrow
 20888 \let\updownarrow\textupdownarrow

20889 `\let\nwarrow\textnwarrow`
 20890 `\let\nearrow\textnearrow`
 20891 `\let\searrow\textsearrow`
 20892 `\let\swarrow\textswarrow`
 20893 `\let\nleftarrow\textnleftarrow`
 20894 `\let\nrightarrow\textnrightarrow`
 20895 `\let\twoheadleftarrow\texttwoheadleftarrow`
 20896 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
 20897 `\let\twoheaduparrow\texttwoheaduparrow`
 20898 `\let\twoheadrightarrow\texttwoheadrightarrow`
 20899 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
 20900 `\let\twoheaddownarrow\texttwoheaddownarrow`
 20901 `\let\leftarrowtail\textleftarrowtail`
 20902 `\let\rightarrowtail\textrightarrowtail`
 20903 `\let\mapsto\textmapsto`
 20904 `\let\hookrightarrow\texthookrightarrow`
 20905 `\let\hookrightarrow\texthookrightarrow`
 20906 `\let\looparrowleft\textlooparrowleft`
 20907 `\let\looparrowright\textlooparrowright`
 20908 `\let\leftrightharpoonup\textleftrightharpoonup`
 20909 `\let\lightning\textlightning`
 20910 `\let\dash\textdash`
 20911 `\let\curvearrowleft\textcurvearrowleft`
 20912 `\let\curvearrowright\textcurvearrowright`
 20913 `\let\leftharpoonup\textleftharpoonup`
 20914 `\let\leftharpoondown\textleftharpoondown`
 20915 `\let\upharpoonright\textupharpoonright`
 20916 `\let\upharpoonleft\textupharpoonleft`
 20917 `\let\rightharpoonup\text\rightharpoonup`
 20918 `\let\rightharpoondown\text\rightharpoondown`
 20919 `\let\downharpoonright\textdownharpoonright`
 20920 `\let\downharpoonleft\textdownharpoonleft`
 20921 `\let\rightleftarrows\textrightleftarrows`
 20922 `\let\updownarrows\textupdownarrows`
 20923 `\let\leftrightarrows\textleftrightarrows`
 20924 `\let\leftleftarrows\textleftleftarrows`
 20925 `\let\upuparrows\textupuparrows`
 20926 `\let\righttrightarrows\textrighttrightarrows`
 20927 `\let\downdownarrows\textdowndownarrows`
 20928 `\let\leftrightharpoons\textleftrightharpoons`
 20929 `\let\rightleftharpoons\textrightleftharpoons`
 20930 `\let\NLeftarrow\textNLeftarrow`
 20931 `\let\NLeftrightarrow\textNLeftrightarrow`
 20932 `\let\NRrightarrow\textNRrightarrow`
 20933 `\let\Leftarrow\textLeftarrow`
 20934 `\let\Uparrow\textUparrow`
 20935 `\let\Rightarrow\textRightarrow`
 20936 `\let\Downarrow\textDownarrow`
 20937 `\let\Leftrightarrow\textLeftrightarrow`
 20938 `\let\Updownarrow\textUpdownarrow`
 20939 `\let\Nwarrow\textNwarrow`
 20940 `\let\Nearrow\textNearrow`
 20941 `\let\searrow\textsearrow`
 20942 `\let\swarrow\textswarrow`
 20943 `\let\Lleftarrow\textLleftarrow`
 20944 `\let\Rrightarrow\textRrightarrow`
 20945 `\let\leftsquigarrow\textleftsquigarrow`

20946 $\backslash\mathrm{rightsquigarrow}\mathrm{textrightsquigarrow}$
 20947 $\backslash\mathrm{dashleftarrow}\mathrm{texdashleftarrow}$
 20948 $\backslash\mathrm{dasheduparrow}\mathrm{texdasheduparrow}$
 20949 $\backslash\mathrm{dashrightarrow}\mathrm{texdashrightarrow}$
 20950 $\backslash\mathrm{dasheddownarrow}\mathrm{texdasheddownarrow}$
 20951 $\backslash\mathrm{pointer}\mathrm{textpointer}$
 20952 $\backslash\mathrm{downuparrows}\mathrm{texdownuparrows}$
 20953 $\backslash\mathrm{leftarrowtriangle}\mathrm{texleftarrowtriangle}$
 20954 $\backslash\mathrm{rightarrowtriangle}\mathrm{texrightarrowtriangle}$
 20955 $\backslash\mathrm{leftrightarrowtriangle}\mathrm{texleftrightarrowtriangle}$
 20956 $\backslash\mathrm{forall}\mathrm{textforall}$
 20957 $\backslash\mathrm{complement}\mathrm{textcomplement}$
 20958 $\backslash\mathrm{partial}\mathrm{textpartial}$
 20959 $\backslash\mathrm{exists}\mathrm{texexists}$
 20960 $\backslash\mathrm{nexists}\mathrm{texnexists}$
 20961 $\backslash\mathrm{emptyset}\mathrm{textemptyset}$
 20962 $\backslash\mathrm{triangle}\mathrm{texttriangle}$
 20963 $\backslash\mathrm{nabla}\mathrm{texnabla}$
 20964 $\backslash\mathrm{in}\mathrm{textin}$
 20965 $\backslash\mathrm{notin}\mathrm{textnotin}$
 20966 $\backslash\mathrm{smallin}\mathrm{textsmallin}$
 20967 $\backslash\mathrm{ni}\mathrm{texni}$
 20968 $\backslash\mathrm{notowner}\mathrm{textnotowner}$
 20969 $\backslash\mathrm{smallowns}\mathrm{textsmallowns}$
 20970 $\backslash\mathrm{prod}\mathrm{textprod}$
 20971 $\backslash\mathrm{amalg}\mathrm{textamalg}$
 20972 $\backslash\mathrm{sum}\mathrm{textsum}$
 20973 $\backslash\mathrm{mp}\mathrm{textmp}$
 20974 $\backslash\mathrm{dotplus}\mathrm{texdotplus}$
 20975 $\backslash\mathrm{Divides}\mathrm{textDivides}$
 20976 $\backslash\mathrm{DividesNot}\mathrm{textDividesNot}$
 20977 $\backslash\mathrm{setminus}\mathrm{textsetminus}$
 20978 $\backslash\mathrm{ast}\mathrm{textast}$
 20979 $\backslash\mathrm{circ}\mathrm{textcirc}$
 20980 $\backslash\mathrm{surd}\mathrm{textsurd}$
 20981 $\backslash\mathrm{propto}\mathrm{textpropto}$
 20982 $\backslash\mathrm{infty}\mathrm{texinfty}$
 20983 $\backslash\mathrm{angle}\mathrm{textangle}$
 20984 $\backslash\mathrm{measuredangle}\mathrm{textmeasuredangle}$
 20985 $\backslash\mathrm{sphericalangle}\mathrm{textsphericalangle}$
 20986 $\backslash\mathrm{mid}\mathrm{textmid}$
 20987 $\backslash\mathrm{nmid}\mathrm{texnmid}$
 20988 $\backslash\mathrm{parallel}\mathrm{textparallel}$
 20989 $\backslash\mathrm{nparallel}\mathrm{texnparallel}$
 20990 $\backslash\mathrm{wedge}\mathrm{textwedge}$
 20991 $\backslash\mathrm{owedge}\mathrm{textowedge}$
 20992 $\backslash\mathrm{vee}\mathrm{textvee}$
 20993 $\backslash\mathrm{ovee}\mathrm{textovee}$
 20994 $\backslash\mathrm{cap}\mathrm{textcap}$
 20995 $\backslash\mathrm{cup}\mathrm{textcup}$
 20996 $\backslash\mathrm{int}\mathrm{textint}$
 20997 $\backslash\mathrm{iint}\mathrm{texiint}$
 20998 $\backslash\mathrm{iiint}\mathrm{texiiint}$
 20999 $\backslash\mathrm{ooint}\mathrm{textoint}$
 21000 $\backslash\mathrm{oiint}\mathrm{texoiint}$
 21001 $\backslash\mathrm{oointclockwise}\mathrm{textointclockwise}$
 21002 $\backslash\mathrm{oointctrlockwise}\mathrm{textointctrlockwise}$

21003 \let\therefore\texttherefore
 21004 \let\because\textbecause
 21005 \let\vdotdot\textvdotdot
 21006 \let\squaredots\textsquaredots
 21007 \let\dotminus\textdotminus
 21008 \let\eqcolon\texteqcolon
 21009 \let\sim\textsim
 21010 \let\backsim\textbacksim
 21011 \let\backsim\textnbacksim
 21012 \let\wr\textwr
 21013 \let\sim\textnsim
 21014 \let\eqsim\texteqsim
 21015 \let\neqsim\textneqsim
 21016 \let\simeq\textsimeq
 21017 \let\sim\textnsimeq
 21018 \let\cong\textcong
 21019 \let\cong\textncong
 21020 \let\approx\textapprox
 21021 \let\approx\textnapprox
 21022 \let\approx\textapprox
 21023 \let\approx\textnapprox
 21024 \let\triplesim\texttriplesim
 21025 \let\triplesim\textntriplesim
 21026 \let\backcong\textbackcong
 21027 \let\backcong\textnbackcong
 21028 \let\asymp\textasymp
 21029 \let\asymp\textnasymp
 21030 \let\Bumpeq\textBumpeq
 21031 \let\Bumpeq\textnBumpeq
 21032 \let\bumpeq\textbumpeq
 21033 \let\bumpeq\textnbumpeq
 21034 \let\doteq\textdoteq
 21035 \let\doteq\textndoteq
 21036 \let\doteq\textdoteqdot
 21037 \let\doteq\textndoteq
 21038 \let\fallingdoteq\textfallingdoteq
 21039 \let\fallingdoteq\textnfallingdoteq
 21040 \let\risingdoteq\textrisingdoteq
 21041 \let\risingdoteq\textnrisingdoteq
 21042 \let\colonequals\textcolonequals
 21043 \let\equalscolon\textequalscolon
 21044 \let\eqcirc\texteqcirc
 21045 \let\neqcirc\textneqcirc
 21046 \let\circeq\textcirceq
 21047 \let\ncirceq\textncirceq
 21048 \let\hateq\texthateq
 21049 \let\hateq\textnhateq
 21050 \let\triangleeq\texttriangleeq
 21051 \let\neq\textneq
 21052 \let\ne\textne
 21053 \let\equiv\textequiv
 21054 \let\equiv\textnequiv
 21055 \let\leq\textleq
 21056 \let\le\textle
 21057 \let\geq\textgeq
 21058 \let\ge\textge
 21059 \let\leqq\textleqq

21060 `\let\nleqq\textnleqq`
 21061 `\let\geqq\textgeqq`
 21062 `\let\ngeqq\textngeqq`
 21063 `\let\lneqq\textlneqq`
 21064 `\let\gneqq\textgneqq`
 21065 `\let\ll\textll`
 21066 `\let\nll\textnll`
 21067 `\let\gg\textgg`
 21068 `\let\ngg\textngg`
 21069 `\let\between\textbetween`
 21070 `\let\nless\textnless`
 21071 `\let\ngtr\textngtr`
 21072 `\let\nleq\textnleq`
 21073 `\let\ngeq\textngeq`
 21074 `\let\lesssim\textlesssim`
 21075 `\let\gtrsim\textgtrsim`
 21076 `\let\nlesssim\textnlesssim`
 21077 `\let\ngtrsim\textngtrsim`
 21078 `\let\lessgtr\textlessgtr`
 21079 `\let\gtrless\textgtrless`
 21080 `\let\ngtrless\textngtrless`
 21081 `\let\nlessgtr\textnlessgtr`
 21082 `\let\prec\textprec`
 21083 `\let\succ\textsucc`
 21084 `\let\preccurlyeq\textpreccurlyeq`
 21085 `\let\succcurlyeq\textsucccurlyeq`
 21086 `\let\precsim\textprecsim`
 21087 `\let\mprecsim\textmprecsim`
 21088 `\let\succsim\textsuccsim`
 21089 `\let\msuccsim\textmsuccsim`
 21090 `\let\mprec\textmprec`
 21091 `\let\msucc\textmsucc`
 21092 `\let\subset\textsubset`
 21093 `\let\supset\textsupset`
 21094 `\let\subset\textsubset`
 21095 `\let\supset\textsupset`
 21096 `\let\subseteq\textsubseteq`
 21097 `\let\supseteq\textsupseteq`
 21098 `\let\subset\textsubset`
 21099 `\let\supseteq\textsupseteq`
 21100 `\let\subsetneq\textsubsetneq`
 21101 `\let\supsetneq\textsupsetneq`
 21102 `\let\cupdot\textcupdot`
 21103 `\let\cupplus\textcupplus`
 21104 `\let\sqsubset\textsqsubset`
 21105 `\let\sqsubset\textsqsubset`
 21106 `\let\sqsupset\textsqsupset`
 21107 `\let\sqsupset\textsqsupset`
 21108 `\let\sqsubseteq\textsqsubseteq`
 21109 `\let\sqsubseteq\textsqsubseteq`
 21110 `\let\sqsupseteq\textsqsupseteq`
 21111 `\let\sqsupseteq\textsqsupseteq`
 21112 `\let\sqcap\textsqcap`
 21113 `\let\sqcup\textsqcup`
 21114 `\let\oplus\textoplus`
 21115 `\let\ominus\textominus`
 21116 `\let\otimes\textotimes`

21117 $\backslash\text{oslash}\text{textoslash}$
 21118 $\backslash\text{odot}\text{textodot}$
 21119 $\backslash\text{circledcirc}\text{textcircledcirc}$
 21120 $\backslash\text{circledast}\text{textcircledast}$
 21121 $\backslash\text{circledash}\text{textcircledash}$
 21122 $\backslash\text{boxplus}\text{textboxplus}$
 21123 $\backslash\text{boxminus}\text{textboxminus}$
 21124 $\backslash\text{boxtimes}\text{textboxtimes}$
 21125 $\backslash\text{boxdot}\text{textboxdot}$
 21126 $\backslash\text{vdash}\text{textvdash}$
 21127 $\backslash\text{dashv}\text{textdashv}$
 21128 $\backslash\text{ndashv}\text{textndashv}$
 21129 $\backslash\text{top}\text{texttop}$
 21130 $\backslash\text{ndownvdash}\text{textndownvdash}$
 21131 $\backslash\text{bot}\text{textbot}$
 21132 $\backslash\text{nupvdash}\text{textnupvdash}$
 21133 $\backslash\text{vDash}\text{textvDash}$
 21134 $\backslash\text{Vdash}\text{textVdash}$
 21135 $\backslash\text{Vvdash}\text{textVvdash}$
 21136 $\backslash\text{nVdash}\text{textnVdash}$
 21137 $\backslash\text{VDash}\text{textVDash}$
 21138 $\backslash\text{nvDash}\text{textnvDash}$
 21139 $\backslash\text{nvDash}\text{textnvDash}$
 21140 $\backslash\text{nVdash}\text{textnVdash}$
 21141 $\backslash\text{nVDash}\text{textnVDash}$
 21142 $\backslash\text{lhs}\text{textlhs}$
 21143 $\backslash\text{rhs}\text{textrhs}$
 21144 $\backslash\text{unlhs}\text{textunlhs}$
 21145 $\backslash\text{unrhs}\text{textunrhs}$
 21146 $\backslash\text{multimapdotbothA}\text{textmultimapdotbothA}$
 21147 $\backslash\text{multimapdotbothB}\text{textmultimapdotbothB}$
 21148 $\backslash\text{multimap}\text{textmultimap}$
 21149 $\backslash\text{veebar}\text{textveebar}$
 21150 $\backslash\text{barwedge}\text{textbarwedge}$
 21151 $\backslash\text{star}\text{textstar}$
 21152 $\backslash\text{divideontimes}\text{textdivideontimes}$
 21153 $\backslash\text{bowtie}\text{textbowtie}$
 21154 $\backslash\text{ltimes}\text{textltimes}$
 21155 $\backslash\text{rtimes}\text{textrtimes}$
 21156 $\backslash\text{leftthreetimes}\text{textleftthreetimes}$
 21157 $\backslash\text{rightthreetimes}\text{textrightthreetimes}$
 21158 $\backslash\text{backsimeq}\text{textbacksimeq}$
 21159 $\backslash\text{nbacksimeq}\text{textnbacksimeq}$
 21160 $\backslash\text{curlyvee}\text{textcurlyvee}$
 21161 $\backslash\text{curlywedge}\text{textcurlywedge}$
 21162 $\backslash\text{Subset}\text{textSubset}$
 21163 $\backslash\text{nSubset}\text{textnSubset}$
 21164 $\backslash\text{Supset}\text{textSupset}$
 21165 $\backslash\text{nSupset}\text{textnSupset}$
 21166 $\backslash\text{Cap}\text{textCap}$
 21167 $\backslash\text{Cup}\text{textCup}$
 21168 $\backslash\text{pitchfork}\text{textpitchfork}$
 21169 $\backslash\text{lessdot}\text{textlessdot}$
 21170 $\backslash\text{gtrdot}\text{textgtrdot}$
 21171 $\backslash\text{lll}\text{textlll}$
 21172 $\backslash\text{ggg}\text{textggg}$
 21173 $\backslash\text{lesseqgtr}\text{textlesseqgtr}$

21174 `\let\gtreqless\textgtreqless`
 21175 `\let\curlyeqprec\textcurlyeqprec`
 21176 `\let\ncurlyeqprec\textncurlyeqprec`
 21177 `\let\curlyeqsucc\textcurlyeqsucc`
 21178 `\let\ncurlyeqsucc\textncurlyeqsucc`
 21179 `\let\mpreccurlyeq\textmpreccurlyeq`
 21180 `\let\msucccurlyeq\textmsucccurlyeq`
 21181 `\let\nqsubseteq\textnqsubseteq`
 21182 `\let\nqsupseteq\textnqsupseteq`
 21183 `\let\sqsubsetneq\textsqssubsetneq`
 21184 `\let\sqsupsetneq\textsqsupsetneq`
 21185 `\let\lnsim\textlnsim`
 21186 `\let\gnsim\textgnsim`
 21187 `\let\precnsim\textprecnsim`
 21188 `\let\succnsim\textsuccnsim`
 21189 `\let\ntriangleleft\textntriangleleft`
 21190 `\let\ntriangleright\textntriangleright`
 21191 `\let\ntrianglelefteq\textntrianglelefteq`
 21192 `\let\ntrianglerighteq\textntrianglerighteq`
 21193 `\let\vdots\textvdots`
 21194 `\let\cdots\textcdots`
 21195 `\let\udots\textudots`
 21196 `\let\ddots\textddots`
 21197 `\let\barin\textbarin`
 21198 `\let\diameter\textdiameter`
 21199 `\let\backneg\textbackneg`
 21200 `\let\wasylounge\textwasylounge`
 21201 `\let\invbackneg\textinvbackneg`
 21202 `\let\clock\textclock`
 21203 `\let\ulcorner\textulcorner`
 21204 `\let\urcorner\texturcorner`
 21205 `\let\llcorner\textllcorner`
 21206 `\let\lrcorner\textlrcorner`
 21207 `\let\frown\textfrown`
 21208 `\let\smile\textsmile`
 21209 `\let\Keyboard\textKeyboard`
 21210 `\let\langle\textlangle`
 21211 `\let\rangle\textrangle`
 21212 `\let\APLinv\textAPLinv`
 21213 `\let\Tumbler\textTumbler`
 21214 `\let\notslash\textnotslash`
 21215 `\let\notbackslash\textnotbackslash`
 21216 `\let\boxbackslash\textboxbackslash`
 21217 `\let\APLleftarrowbox\textAPLleftarrowbox`
 21218 `\let\APLrightarrowbox\textAPLrightarrowbox`
 21219 `\let\APLuparrowbox\textAPLuparrowbox`
 21220 `\let\APLdownarrowbox\textAPLdownarrowbox`
 21221 `\let\APLinput\textAPLinput`
 21222 `\let\Request\textRequest`
 21223 `\let\Beam\textBeam`
 21224 `\let\hexagon\texthexagon`
 21225 `\let\APLbox\textAPLbox`
 21226 `\let\ForwardToIndex\textForwardToIndex`
 21227 `\let\RewindToIndex\textRewindToIndex`
 21228 `\let\bbslash\textbbslash`
 21229 `\let\CircledA\textCircledA`
 21230 `\let\CleaningF\textCleaningF`

21231 \let\CleaningFF\textCleaningFF
 21232 \let\CleaningP\textCleaningP
 21233 \let\CleaningPP\textCleaningPP
 21234 \let\CuttingLine\textCuttingLine
 21235 \let\UParrow\textUParrow
 21236 \let\bigtriangleup\textbigtriangleup
 21237 \let\Forward\textForward
 21238 \let\triangleright\texttriangleright
 21239 \let\RHD\textRHD
 21240 \let\DOWNarrow\textDOWNarrow
 21241 \let\bigtriangledown\textbigtriangledown
 21242 \let\Rewind\textRewind
 21243 \let\triangleleft\texttriangleleft
 21244 \let\LHD\textLHD
 21245 \let\diamond\textdiamond
 21246 \let\lozenge\textlozenge
 21247 \let\LEFTCIRCLE\textLEFTCIRCLE
 21248 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21249 \let\openbullet\textopenbullet
 21250 \let\boxbar\textboxbar
 21251 \let\bigcircle\textbigcircle
 21252 \let\Cloud\textCloud
 21253 \let\FiveStar\textFiveStar
 21254 \let\FiveStarOpen\textFiveStarOpen
 21255 \let\Phone\textPhone
 21256 \let\boxempty\textboxempty
 21257 \let\Checkedbox\textCheckedbox
 21258 \let\Crossedbox\textCrossedbox
 21259 \let\Coffeecup\textCoffeecup
 21260 \let\HandCuffLeft\textHandCuffLeft
 21261 \let\HandCuffRight\textHandCuffRight
 21262 \let\HandLeft\textHandLeft
 21263 \let\HandRight\textHandRight
 21264 \let\Radioactivity\textRadioactivity
 21265 \let\Biohazard\textBiohazard
 21266 \let\Ankh\textAnkh
 21267 \let\YinYang\textYinYang
 21268 \let\frownie\textfrownie
 21269 \let\smiley\textsmiley
 21270 \let\blacksmiley\textblacksmiley
 21271 \let\sun\textsun
 21272 \let\leftmoon\textleftmoon
 21273 \let\rightmoon\textrightmoon
 21274 \let\mercury\textmercury
 21275 \let\earth\textearth
 21276 \let\male\textmale
 21277 \let\jupiter\textjupiter
 21278 \let\saturn\textsaturn
 21279 \let\uranus\texturanus
 21280 \let\neptune\textneptune
 21281 \let\pluto\textpluto
 21282 \let\aries\textaries
 21283 \let\taurus\texttaurus
 21284 \let\gemini\textgemini
 21285 \let\cancer\textcancer
 21286 \let\leo\textleo
 21287 \let\virgo\textvirgo

21288 \let\libra\textlibra
 21289 \let\scorpio\textscorpio
 21290 \let\sagittarius\textsagittarius
 21291 \let\capricornus\textcapricornus
 21292 \let\aquarius\textaquarius
 21293 \let\pisces\textpisces
 21294 \let\quarternote\textquarternote
 21295 \let\twonotes\texttwonotes
 21296 \let\sixteenthnote\textsixteenthnote
 21297 \let\flat\textflat
 21298 \let\natural\textnatural
 21299 \let\sharp\textsharp
 21300 \let\recycle\textrecycle
 21301 \let\Wheelchair\textWheelchair
 21302 \let\Flag\textFlag
 21303 \let\MineSign\textMineSign
 21304 \let\ds military\textds military
 21305 \let\ds medical\textds medical
 21306 \let\ds juridical\textds juridical
 21307 \let\ds chemical\textds chemical
 21308 \let\ds biological\textds biological
 21309 \let\ds commercial\textds commercial
 21310 \let\manstar\textmanstar
 21311 \let\danger\textdanger
 21312 \let\FemaleFemale\textFemaleFemale
 21313 \let\MaleMale\textMaleMale
 21314 \let\FemaleMale\textFemaleMale
 21315 \let\Hermaphrodite\textHermaphrodite
 21316 \let\Neutral\textNeutral
 21317 \let\hexstar\texthexstar
 21318 \let\SunClod\textSunClod
 21319 \let\Rain\textRain
 21320 \let\noway\textnoway
 21321 \let\Mountain\textMountain
 21322 \let\Tent\textTent
 21323 \let\ScissorRight\textScissorRight
 21324 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21325 \let\ScissorHollowRight\textScissorHollowRight
 21326 \let\PhoneHandset\textPhoneHandset
 21327 \let\Tape\textTape
 21328 \let\Plane\textPlane
 21329 \let\Envelope\textEnvelope
 21330 \let\Peace\textPeace
 21331 \let\WritingHand\textWritingHand
 21332 \let\PencilRightDown\textPencilRightDown
 21333 \let\PencilRight\textPencilRight
 21334 \let\PencilRightUp\textPencilRightUp
 21335 \let\NibRight\textNibRight
 21336 \let\NibSolidRight\textNibSolidRight
 21337 \let\Checkmark\textCheckmark
 21338 \let\CheckmarkBold\textCheckmarkBold
 21339 \let\XSolid\textXSolid
 21340 \let\XSolidBold\textXSolidBold
 21341 \let\XSolidBrush\textXSolidBrush
 21342 \let\PlusOutline\textPlusOutline
 21343 \let\Plus\textPlus
 21344 \let\PlusThinCenterOpen\textPlusThinCenterOpen

21345 \let\PlusCenterOpen\textPlusCenterOpen
 21346 \let\Cross\textCross
 21347 \let\CrossOpenShadow\textCrossOpenShadow
 21348 \let\CrossOutline\textCrossOutline
 21349 \let\CrossMaltese\textCrossMaltese
 21350 \let\DavidStar\textDavidStar
 21351 \let\FourAsterisk\textFourAsterisk
 21352 \let\JackStar\textJackStar
 21353 \let\JackStarBold\textJackStarBold
 21354 \let\ClowerTips\textClowerTips
 21355 \let\FourStar\textFourStar
 21356 \let\FourStarOpen\textFourStarOpen
 21357 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21358 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21359 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21360 \let\FiveStarOutline\textFiveStarOutline
 21361 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21362 \let\FiveStarConvex\textFiveStarConvex
 21363 \let\FiveStarShadow\textFiveStarShadow
 21364 \let\AsteriskBold\textAsteriskBold
 21365 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21366 \let\EightStarTaper\textEightStarTaper
 21367 \let\EightStarConvex\textEightStarConvex
 21368 \let\SixStar\textSixStar
 21369 \let\EightStar\textEightStar
 21370 \let\EightStarBold\textEightStarBold
 21371 \let\TwelveStar\textTwelveStar
 21372 \let\SixteenStarLight\textSixteenStarLight
 21373 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21374 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21375 \let\Asterisk\textAsterisk
 21376 \let\SixFlowerAlternate\textSixFlowerAlternate
 21377 \let\FiveFlowerPetal\textFiveFlowerPetal
 21378 \let\FiveFlowerOpen\textFiveFlowerOpen
 21379 \let\EightFlowerPetal\textEightFlowerPetal
 21380 \let\SunshineOpenCircled\textSunshineOpenCircled
 21381 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21382 \let\SnowflakeChevron\textSnowflakeChevron
 21383 \let\Snowflake\textSnowflake
 21384 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21385 \let\Sparkle\textSparkle
 21386 \let\SparkleBold\textSparkleBold
 21387 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21388 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21389 \let\EightAsterisk\textEightAsterisk
 21390 \let\CircleShadow\textCircleShadow
 21391 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21392 \let\SquareTopRight\textSquareTopRight
 21393 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21394 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21395 \let\DiamandSolid\textDiamandSolid
 21396 \let\RectangleThin\textRectangleThin
 21397 \let\Rectangle\textRectangle
 21398 \let\RectangleBold\textRectangleBold
 21399 \let\perp\textperp
 21400 \let\notperp\textnotperp
 21401 \let\veedot\textveedot

21402 \let\wedgedot\textwedgedot
 21403 \let\leftspoon\textleftspoon
 21404 \let\lbrackdbl\textlbrackdbl
 21405 \let\rbrackdbl\textrbrackdbl
 21406 \let\circlearrowleft\textcirclearrowleft
 21407 \let\circlearrowright\textcirclearrowright
 21408 \let\longleftarrow\textlongleftarrow
 21409 \let\longrightarrow\textlongrightarrow
 21410 \let\longleftarrow\textlongleftarrow
 21411 \let\Longleftarrow\textLongleftarrow
 21412 \let\Longrightarrow\textLongrightarrow
 21413 \let\Longleftarrow\textLongleftarrow
 21414 \let\longmapsto\textlongmapsto
 21415 \let\Longmapsfrom\textLongmapsfrom
 21416 \let\Longmapsto\textLongmapsto
 21417 \let\nwsearrow\textnwsearrow
 21418 \let\neswarrow\textneswarrow
 21419 \let\hookrightarrow\texthookrightarrow
 21420 \let\rhookrightarrow\texthookrightarrow
 21421 \let\hookrightarrow\texthookrightarrow
 21422 \let\rhookrightarrow\texthookrightarrow
 21423 \let\leadsto\textleadsto
 21424 \let\curvearrowright\textcurvearrowright
 21425 \let\curvearrowleft\textcurvearrowleft
 21426 \let\curvearrowright\textcurvearrowright
 21427 \let\curvearrowright\textcurvearrowright
 21428 \let\curvearrowdown\textcurvearrowdown
 21429 \let\curvearrowdown\textcurvearrowdown
 21430 \let\curvearrowleft\textcurvearrowleft
 21431 \let\curvearrowright\textcurvearrowright
 21432 \let\leftrightharpoon\textleftrightharpoon
 21433 \let\rightleftharpoon\textrightleftharpoon
 21434 \let\updownharpoonright\textupdownharpoonright
 21435 \let\updownharpoonleft\textupdownharpoonleft
 21436 \let\leftleftharpoons\textleftleftharpoons
 21437 \let\upupharpoons\textupupharpoons
 21438 \let\rightleftharpoons\textrightleftharpoons
 21439 \let\downharpoons\textdownharpoons
 21440 \let\leftbarharpoon\textleftbarharpoon
 21441 \let\barleftharpoon\textbarleftharpoon
 21442 \let\rightbarharpoon\textrightbarharpoon
 21443 \let\barharpoon\textbarharpoon
 21444 \let\updownharpoons\textupdownharpoons
 21445 \let\downupharpoons\textdownupharpoons
 21446 \let\moo\textmoo
 21447 \let\llparenthesis\textllparenthesis
 21448 \let\rrparenthesis\textrrparenthesis
 21449 \let\invdiameter\textinvdiameter
 21450 \let\obar\textobar
 21451 \let\obslash\textobslash
 21452 \let\obot\textobot
 21453 \let\NoChemicalCleaning\textNoChemicalCleaning
 21454 \let\olessthan\textolessthan
 21455 \let\ogreaterthan\textogreaterthan
 21456 \let\boxslash\textboxslash
 21457 \let\boxbslash\textboxbslash
 21458 \let\boxast\textboxast

21459 $\backslash\text{boxcircle}\text{textboxcircle}$
 21460 $\backslash\text{boxbox}\text{textboxbox}$
 21461 $\backslash\text{Valve}\text{textValve}$
 21462 $\backslash\text{multimapboth}\text{textmultimapboth}$
 21463 $\backslash\text{shuffle}\text{textshuffle}$
 21464 $\backslash\text{uplus}\text{textuplus}$
 21465 $\backslash\text{bigdoublewedge}\text{textbigdoublewedge}$
 21466 $\backslash\text{bigdoublevee}\text{textbigdoublevee}$
 21467 $\backslash\text{Join}\text{textJoin}$
 21468 $\backslash\text{fatsemi}\text{textfatsemi}$
 21469 $\backslash\text{circplus}\text{textcircplus}$
 21470 $\backslash\text{minusdot}\text{textminusdot}$
 21471 $\backslash\text{dotimes}\text{textdotimes}$
 21472 $\backslash\text{dtimes}\text{textdtimes}$
 21473 $\backslash\text{odiv}\text{textodiv}$
 21474 $\backslash\text{invneg}\text{textinvneg}$
 21475 $\backslash\text{sqdoublecap}\text{textsdoublecap}$
 21476 $\backslash\text{capdot}\text{textcapdot}$
 21477 $\backslash\text{sqdoublecup}\text{textsdoublecup}$
 21478 $\backslash\text{doublewedge}\text{textdoublewedge}$
 21479 $\backslash\text{doublevee}\text{textdoublevee}$
 21480 $\backslash\text{doublebarwedge}\text{textdoublebarwedge}$
 21481 $\backslash\text{veedoublebar}\text{textveedoublebar}$
 21482 $\backslash\text{eqdot}\text{texteqdot}$
 21483 $\backslash\text{neqdot}\text{textneqdot}$
 21484 $\backslash\text{coloncolonequals}\text{textcoloncolonequals}$
 21485 $\backslash\text{leqslant}\text{textleqslant}$
 21486 $\backslash\text{nleqslant}\text{textnleqslant}$
 21487 $\backslash\text{geqslant}\text{textgeqslant}$
 21488 $\backslash\text{ngeqslant}\text{textngeqslant}$
 21489 $\backslash\text{lessapprox}\text{textlessapprox}$
 21490 $\backslash\text{nlessapprox}\text{textnlessapprox}$
 21491 $\backslash\text{gtrapprox}\text{textgtrapprox}$
 21492 $\backslash\text{ngtrapprox}\text{textngtrapprox}$
 21493 $\backslash\text{lneq}\text{textlneq}$
 21494 $\backslash\text{gneq}\text{textgneq}$
 21495 $\backslash\text{lnapprox}\text{textlnapprox}$
 21496 $\backslash\text{gnapprox}\text{textgnapprox}$
 21497 $\backslash\text{lesseqqgtr}\text{textlesseqqgtr}$
 21498 $\backslash\text{gtreqqless}\text{textgtreqqless}$
 21499 $\backslash\text{eqslantless}\text{texteqslantless}$
 21500 $\backslash\text{eqslantgtr}\text{texteqslantgtr}$
 21501 $\backslash\text{leftslice}\text{textleftslice}$
 21502 $\backslash\text{rightslice}\text{textrightslice}$
 21503 $\backslash\text{preceq}\text{textpreceq}$
 21504 $\backslash\text{npreceq}\text{textnpreceq}$
 21505 $\backslash\text{succeq}\text{textsucceq}$
 21506 $\backslash\text{nsucceq}\text{textnsucceq}$
 21507 $\backslash\text{precneq}\text{textprecneq}$
 21508 $\backslash\text{succneq}\text{textsuccneq}$
 21509 $\backslash\text{preceqq}\text{textpreceqq}$
 21510 $\backslash\text{npreceqq}\text{textnpreceqq}$
 21511 $\backslash\text{succeqq}\text{textsucceqq}$
 21512 $\backslash\text{nsucceqq}\text{textnsucceqq}$
 21513 $\backslash\text{precneqq}\text{textprecneqq}$
 21514 $\backslash\text{succneqq}\text{textsuccneqq}$
 21515 $\backslash\text{precapprox}\text{textprecapprox}$

21516 \let\nprecapprox\textnprecapprox
 21517 \let\succapprox\textsuccapprox
 21518 \let\nsuccapprox\textnsuccapprox
 21519 \let\precnapprox\textprecnapprox
 21520 \let\succnapprox\textsuccnapprox
 21521 \let\subseteqq\textsubseteqq
 21522 \let\nsubseteqq\textnsubseteqq
 21523 \let\supseteqq\textsupseteqq
 21524 \let\nsupseteqq\textnsupseteqq
 21525 \let\dashV\textdashV
 21526 \let\ndashV\textndashV
 21527 \let\Dashv\textDashv
 21528 \let\ndashv\textndashv
 21529 \let\DashV\textDashV
 21530 \let\ndashV\textndashV
 21531 \let\downmodels\textdownmodels
 21532 \let\ndownmodels\textndownmodels
 21533 \let\upmodels\textupmodels
 21534 \let\nupmodels\textnupmodels
 21535 \let\upspoon\textupspoon
 21536 \let\interleave\textinterleave
 21537 \let\sslash\textsslash
 21538 \let\pentagon\textpentagon
 21539 \let\varhexagon\textvarhexagon
 21540 \let\jinferior\textjinferior
 21541 \let\slashdiv\textslashdiv
 21542 \let\fivedots\textfivedots
 21543 \let\oo\textoo
 21544 \let\GaPa\textGaPa
 21545 \let\HaPa\textHaPa
 21546 \let\ViPa\textViPa
 21547 \let\AcPa\textAcPa
 21548 \let\SePa\textSePa
 21549 \let\ZwPa\textZwPa
 21550 \let\fullnote\textfullnote
 21551 \let\halfnote\texthalfnote
 21552 \let\Vier\textVier
 21553 \let\Acht\textAcht
 21554 \let\Sech\textSech
 21555 \let\Zwdr\textZwdr
 21556 \let\Mundus\textMundus
 21557 \let\Moon\textMoon
 21558 \let\ManFace\textManFace
 21559 \let\WomanFace\textWomanFace
 21560 \let\Fax\textFax
 21561 \let\Fire\textFire
 21562 \let\Bicycle\textBicycle
 21563 \let\Gentsroom\textGentsroom
 21564 \let\Ladiesroom\textLadiesroom
 21565 \let\ccnc\textccnc
 21566 \let\ccsa\textccsa
 21567 \let\Info\textInfo
 21568 \let\CESign\textCESign
 21569 \let\neg\textneg
 21570 \let\times\texttimes
 21571 \let\div\textdiv
 21572 \let\pm\textpm

21573 \let\cdot\textcdot
 21574 }% \psdmapshortnames
 21575 \newcommand*{\psdaliasnames}{%
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 21577 \let\fcdice\HyPsd@DieFace
 21578 \let\MoonPha\HyPsd@MoonPha
 21579 \let\mathdollar\textdollar
 21580 \let\EyesDollar\textdollar
 21581 \let\binampersand\textampersand
 21582 \let\with\textampersand
 21583 \let\mathunderscore\textunderscore
 21584 \let\textvertline\textbar
 21585 \let\mathsterling\textsterling
 21586 \let\pounds\textsterling
 21587 \let\brokenvert\textbrokenbar
 21588 \let\mathsection\textsection
 21589 \let\S\textsection
 21590 \let\mathparagraph\textparagraph
 21591 \let\MultiplicationDot\textperiodcentered
 21592 \let\Squaredot\textperiodcentered
 21593 \let\vartimes\textmultiply
 21594 \let\MVMultiplication\textmultiply
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 21596 \let\crossd\textcrd
 21597 \let\textbard\textcrd
 21598 \let\bard\textcrd
 21599 \let\textcrh\texthbar
 21600 \let\crossh\texthbar
 21601 \let\planck\texthbar
 21602 \let\eng\ng
 21603 \let\engma\ng
 21604 \let\crossb\textcrb
 21605 \let\textbarb\textcrb
 21606 \let\barb\textcrb
 21607 \let\Florin\textflorin
 21608 \let\hv\texthvligh
 21609 \let\hausak\texthtk
 21610 \let\crossnilambda\textcrlambda
 21611 \let\barlambda\textcrlambda
 21612 \let\lambdabar\textcrlambda
 21613 \let\lambdaslash\textcrlambda
 21614 \let\textnrleg\textPUnrleg
 21615 \let\textpipevar\textpipe
 21616 \let\textdoublepipevar\textdoublepipe
 21617 \let\textdoublebarpipevar\textdoublebarpipe
 21618 \let\textcrg\textgslash
 21619 \let\textdblig\textPUdblig
 21620 \let\textqplig\textPUqplig
 21621 \let\textcentoldstyle\textslashc
 21622 \let\textbarc\textslashc
 21623 \let\inva\textturna
 21624 \let\vara\textscripta
 21625 \let\invscripta\textturnscripta
 21626 \let\rotvara\textturnscripta
 21627 \let\hookb\texthtb
 21628 \let\hausab\texthtb
 21629 \let\varopeno\textopeno

21630 \let\curlyc\textctc
 21631 \let\taild\textrtaild
 21632 \let\hookd\texthtd
 21633 \let\hausad\texthtd
 21634 \let\er\textrhooschwa
 21635 \let\epsi\textniepsilon
 21636 \let\hookrepsilon\textrhooschwa
 21637 \let\closedrepsilon\textcloseepsilon
 21638 \let\barj\textbardotlessj
 21639 \let\hookg\texthtg
 21640 \let\varg\textscriptg
 21641 \let\vod\textipagamma
 21642 \let\invh\textturnh
 21643 \let\udesc\textturnh
 21644 \let\hookh\textthh
 21645 \let\voicedh\textthh
 21646 \let\hookheng\textthheng
 21647 \let\ibar\textbari
 21648 \let\vari\textniota
 21649 \let\tildel\textltilde
 21650 \let\latfric\textbeltl
 21651 \let\tail\textrtail
 21652 \let\lz\textlyoghlig
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 21658 \let\nj\textltailn
 21659 \let\enya\textltailn
 21660 \let\tailn\textrtailn
 21661 \let\closedniomega\textcloseomega
 21662 \let\varomega\textcloseomega
 21663 \let\invr\textturnr
 21664 \let\rotr\textturnr
 21665 \let\invlegr\textturnlonglegr
 21666 \let\tailinvr\textturnrrtail
 21667 \let\legr\textlonglegr
 21668 \let\tailr\textrtailr
 21669 \let\flapr\textfishhookr
 21670 \let\flap\textfishhookr
 21671 \let\tails\textrtails
 21672 \let\curlyesh\textctesh
 21673 \let\clickt\textturnt
 21674 \let\tailt\textrtailt
 21675 \let\ubar\textbaru
 21676 \let\rotOmega\textniupsilon
 21677 \let\invv\textturnv
 21678 \let\pwedge\textturnv
 21679 \let\invw\textturnw
 21680 \let\rotw\textturnw
 21681 \let\invy\textturny
 21682 \let\roty\textturny
 21683 \let\tailz\textrtailz
 21684 \let\curlyz\textctz
 21685 \let\curlyyogh\textctyogh
 21686 \let\ejective\textglotstop

21687 \let\glottal\textglotstop
 21688 \let\reveject\textrevglotstop
 21689 \let\clickc\textstretchc
 21690 \let\textstretchcvar\textstretchc
 21691 \let\clickb\textbullseye
 21692 \let\textObullseye\textbullseye
 21693 \let\textctjvar\textctj
 21694 \let\textturnsck\textturnk
 21695 \let\dz\textdzlig
 21696 \let\tesh\textteshlig
 21697 \let\digamma\textdigammagreek
 21698 \let\hardsign\cyrhrdsn
 21699 \let\softsign\cyrsoftsn
 21700 \let\hebsin\hebshin
 21701 \let\textsck\textPUsc
 21702 \let\textscm\textPUscm
 21703 \let\textscp\textPUscp
 21704 \let\textrevscr\textPUrevscr
 21705 \let\textrhooca\textPURhooca
 21706 \let\textrhooke\textPURhooke
 21707 \let\textrhookepsilon\textPURhookepsilon
 21708 \let\texthookopeno\textPURhookopeno
 21709 \let\textdoublevertline\textbardbl
 21710 \let\dag\textdagger
 21711 \let\ddagger\textdaggerdbl
 21712 \let\ddag\textdaggerdbl
 21713 \let\mathellipsis\textellipsis
 21714 \let\EurDig\texteuro
 21715 \let\EURdig\texteuro
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 21717 \let\EURhv\texteuro
 21718 \let\EurCr\texteuro
 21719 \let\EURcr\texteuro
 21720 \let\EurTm\texteuro
 21721 \let\EURtm\texteuro
 21722 \let\Eur\texteuro
 21723 \let\Denarius\textDeleatur
 21724 \let\agemO\textmho
 21725 \let\EstimatedSign\textestimated
 21726 \let\Ecommerce\textestimated
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 21728 \let\parr\textinvamp
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 21730 \let\MVRightarrow\textrightarrow
 21731 \let\MVArrowDown\textdownarrow
 21732 \let\Force\textdownarrow
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 21738 \let\dashedrightarrow\textdashrightarrow
 21739 \let\varnothing\textemptyset
 21740 \let\owns\textni
 21741 \let\notni\textnotowner
 21742 \let\varprop\textpropto
 21743 \let\varangle\textsphericalangle

21744 \let\Anglesign\textsphericalangle
 21745 \let\AngleSign\textsphericalangle
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 21747 \let\varowedge\textowedge
 21748 \let\varovee\textovee
 21749 \let\varint\textint
 21750 \let\varoint\textoint
 21751 \let\downtherefore\textbecause
 21752 \let\textdotdiv\textdotminus
 21753 \let\AC\textsim
 21754 \let\wreath\textwr
 21755 \let\nthickapprox\textnapprox
 21756 \let\VHF\texttriplesim
 21757 \let\notasymp\textnasymp
 21758 \let\Doteq\textdoteqdot
 21759 \let\corresponds\texthateq
 21760 \let\Corresponds\texthateq
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 21762 \let\Congruent\textequiv
 21763 \let\NotCongruent\textnequiv
 21764 \let\notequiv\textnequiv
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 21766 \let\LargerOrEqual\textgeq
 21767 \let\apprle\textlessim
 21768 \let\apprge\textgtrsim
 21769 \let\varoplus\textoplus
 21770 \let\varominus\textominus
 21771 \let\varotimes\textotimes
 21772 \let\varoslash\textoslash
 21773 \let\varodot\textodot
 21774 \let\ocirc\textcircledcirc
 21775 \let\varocircle\textcircledcirc
 21776 \let\varoast\textcircledast
 21777 \let\oasterisk\textcircledast
 21778 \let\rightvdash\textvdash
 21779 \let\leftvdash\textdashv
 21780 \let\leftvdash\textndashv
 21781 \let\downvdash\texttop
 21782 \let\upvdash\textbot
 21783 \let\perp\textnupvdash
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 21789 \let\rightmodels\textnvDash
 21790 \let\models\textnvDash
 21791 \let\rightVdash\textnVdash
 21792 \let\rightModels\textnVDash
 21793 \let\lessclosed\textlhd
 21794 \let\gtrclosed\textrhd
 21795 \let\leqclosed\textunlhd
 21796 \let\trianglelefteq\textunlhd
 21797 \let\geqclosed\textunrhd
 21798 \let\trianglerighteq\textunrhd
 21799 \let\Bowtie\textbowtie
 21800 \let\varcurlyvee\textcurlyvee

21801 \let\varcurlywedge\textcurlywedge
 21802 \let\doublecap\textCap
 21803 \let\doublecup\textCup
 21804 \let\varsqsubsetneq\textsqsubsetneq
 21805 \let\varsqsupsetneq\textsqsupsetneq
 21806 \let\nlessclosed\textntriangleleft
 21807 \let\ngtrclosed\textntriangleright
 21808 \let\Clocklogo\textclock
 21809 \let\ClockLogo\textclock
 21810 \let\baro\textstmaryrdbaro
 21811 \let\varparallelinv\textbbslash
 21812 \let\CleaningA\textCircledA
 21813 \let\Kutline\textCuttingLine
 21814 \let\CutLine\textCuttingLine
 21815 \let\Cutline\textCuttingLine
 21816 \let\MoveUp\textUParrow
 21817 \let\APLup\textbigtriangleup
 21818 \let\Bleech\textbigtriangleup
 21819 \let\MoveDown\textDOWNarrow
 21820 \let\APLdown\textbigtriangledown
 21821 \let\Diamond\textdiamond
 21822 \let\varbigcirc\textbigcircle
 21823 \let\Telefon\textPhone
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 21827 \let\CrossedBox\textCrossedbox
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 21829 \let\leftpointright\textHandRight
 21830 \let\PointingHand\textHandRight
 21831 \let\Pointinghand\textHandRight
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 21833 \let\Yinyang\textYinYang
 21834 \let\YingYang\textYinYang
 21835 \let\Yingyang\textYinYang
 21836 \let\Frowny\textfrownie
 21837 \let\Smiley\textsmiley
 21838 \let\Sun\textsun
 21839 \let\Mercury\textmercury
 21840 \let\textfemale\textPUfemale
 21841 \let\female\textPUfemale
 21842 \let\venus\textPUfemale
 21843 \let\Venus\textPUfemale
 21844 \let\Female\textPUfemale
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 21846 \let\mars\textmale
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 21848 \let\Male\textmale
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 21853 \let\Pluto\textpluto
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 21855 \let\Taurus\texttaurus
 21856 \let\Gemini\textgemini
 21857 \let\Cancer\textcancer

21858 \let\Leo\textleo
 21859 \let\Virgo\textvirgo
 21860 \let\Libra\textlibra
 21861 \let\Scorpio\textscorpio
 21862 \let\Sagittarius\textsagittarius
 21863 \let\Capricorn\textcapricornus
 21864 \let\Aquarius\textaquarius
 21865 \let\Pisces\textpisces
 21866 \let\spadesuit\textspadesuitblack
 21867 \let\Heart\textheartsuitwhite
 21868 \let\heartsuit\textheartsuitwhite
 21869 \let\diamondsuit\textdiamondsuitwhite
 21870 \let\clubsuit\textclubsuitblack
 21871 \let\eighthnote\textmusicalnote
 21872 \let\Recycling\textrecycle
 21873 \let\VarFlag\textFlag
 21874 \let\textxswup\textdsmilitary
 21875 \let\textuncrfemale\textPUuncrfemale
 21876 \let\Football\textSoccerBall
 21877 \let\CutLeft\textScissorRightBrokenBottom
 21878 \let\Cutright\textScissorRightBrokenBottom
 21879 \let\RightScissors\textScissorRight
 21880 \let\Leftscissors\textScissorRight
 21881 \let\Letter\textEnvelope
 21882 \let\Writinghand\textWritingHand
 21883 \let\checkmark\textCheckmark
 21884 \let\davidstar\textDavidStar
 21885 \let\llbracket\textlbrackdbl
 21886 \let\rrbracket\textrrbrackdbl
 21887 \let\RightTorque\textlcurvearrowdown
 21888 \let\Righttorque\textlcurvearrowdown
 21889 \let\LeftTorque\textrcurvearrowdown
 21890 \let\Lefttorque\textrcurvearrowdown
 21891 \let\textvarobar\textobar
 21892 \let\circledbslash\textobslash
 21893 \let\obackslash\textobslash
 21894 \let\varobslash\textobslash
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 21896 \let\varolessthan\textolessthan
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 21909 \let\textheng\textPUheng
 21910 \let\textlhookfour\textPUlhookfour
 21911 \let\textscf\textPUscf
 21912 \let\textao lig\textPUaolig
 21913 \let\Ganz\textfullnote
 21914 \let\Halb\texthalfnote

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21915 \let\Womanface\textWomanFace
21916 \let\Faxmachine\textFax
21917 \let\CEsign\textCESign
21918 }% \psdaliasnames
21919 \</psdextra>
```

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21921 \typeout{}
21922 \begin{document}
21923 \end{document}
21924 \< /check>
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