

Hypertext marks in \LaTeX

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<https://github.com/latex3/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).

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 Euro \TeX 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 \LaTeX ”

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3 File hyccheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

```

40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

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

`\Hy@SetCatcodes`

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

`\Hy@RestoreCatcodes`

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

```

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

```

```

231 \Hy@SetCatcodes

```

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

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

```

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

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

255 \RequirePackage{infwarerr}[2010/04/08]
256 \RequirePackage{keyval}[1997/11/10]
257 \RequirePackage{kvsetkeys}[2007/09/29]
258 \RequirePackage{kvdefinekeys}[2011/04/07]
259 \RequirePackage{pdfescape}[2007/11/11]
260 \RequirePackage{ifvtex}

```

```

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

```

4.2 Version check

\Hy@VersionChecked

```

277 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

```

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

```

\Hy@@VersionCheck

```

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

```

4.3 Checks with regular expressions

```

325 \ltx@ifundefined{pdfmatch}{%
326 \def\Hy@Match#1#2#3#4#5{%
327 }{%
328 \def\Hy@Match#1#2#3{%
329 \begingroup
330 \edef\~{\ltx@backslashchar\string~}%
331 \edef\.\{\ltx@backslashchar.}%
332 \edef\[\{\ltx@backslashchar[]}%
333 \edef\$\{\ltx@backslashchar$}%
334 \edef\(\{\ltx@backslashchar(}%
335 \edef\)\{\ltx@backslashchar)}%
336 \edef\|\{\ltx@backslashchar|}%
337 \edef\*\{\ltx@backslashchar*}%
338 \edef\+\{\ltx@backslashchar+}%
339 \edef\?\{\ltx@backslashchar?}%
340 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
341 \edef\}\{\ltx@rightbracechar}%
342 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
343 \let\ \ltx@space
344 \ifcase\pdfmatch#2{#3}{#1} %
345 \endgroup
346 \expandafter\ltx@secondoftwo
347 \or
348 \endgroup
349 \expandafter\ltx@firstoftwo
350 \else
351 \Hy@Warning{%
352 Internal error: Wrong pattern!\MessageBreak
353 --> #3 <--\MessageBreak
354 Pattern check ignored%
355 }%
356 \endgroup
357 \expandafter\ltx@firstoftwo
358 \fi
359 }%
360 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%
361 \begingroup
362 \lccode`0=\{\relax
363 \lowercase{\endgroup

```

```

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

```

4.4 Compatibility with format dumps

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

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

```

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

```

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

```

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

```

`\Hy@AtEndOfPackage`

```

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

```

`\Hy@AtBeginDocumentHook`

```

382 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

383 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

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

```

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

```

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

```

4.5 Switches

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

Defaults for the switches are now set.

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



```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

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

```

5.1 Macros for recursions

```

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

```

```
494 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}
```

5.2 Babel's protection of shorthand characters

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

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

5.3 Coordinate transformations

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

`\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`

```
497 \begingroup\expandafter\expandafter\expandafter\endgroup
498 \expandafter\ifx\csname dimexpr\endcsname\relax
499 \def\hypercalsbpdef#1#2{%
500   \begingroup
501     \toks@{}%
502     \HyCal@scan#2\hypercalsbp\@nil
503   \expandafter\endgroup
504   \expandafter\def\expandafter#1\expandafter{\the\toks@}%
505 }%
506 \def\HyCal@scan#1\hypercalsbp#2\@nil{%
507   \toks@\expandafter{\the\toks@ #1}%
508   \ifx\#2\%
509     \else
510       \ltx@ReturnAfterFi{%
511         \HyCal@do#2\@nil
512       }%
513     \else
514       \ltx@ReturnAfterFi{%
515         \HyCal@do#2\@nil
516       }%
517     \fi
518   }%
519 }
```

```

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

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- 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 le-

gal PDFDocEncoded string. Currently the definition is global, but this can be changed in the future.

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

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

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.
2. Expansion. The T_EX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

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

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

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

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

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

```
539 \begingroup
```

6.2.1 Preprocessing

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

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

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

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

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

```
541 \edef\0{\string\0}%
542 \edef\1{\string\1}%
543 \edef\2{\string\2}%
544 \edef\3{\string\3}%
```

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

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

```

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

```

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

```

557 \@inmathwarn\pdfstringdef

```

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

```

558 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

559 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here. UF 29.09.2017: added a mapping for \noboundary, see issue #37 <https://github.com/latex3/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

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

```

```

572 \ltx@ifundefined{textEncodingNoboundary}%
573 {}{\let\noboundary\textEncodingNoboundary}%

```

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.

```

574 \def\\\{\pdfstringdefWarn\\}%
575 \def\newline{\pdfstringdefWarn\newline}%

```

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

```

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

```

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

```

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

```

```

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

```

Package pifont.

```

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

```

Environments.

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

642 \ifHy@psdextra
643 \ifHy@unicode
644 \csname psdmapshortnames\endcsname
645 \csname psdaliasnames\endcsname
646 \fi
647 \fi

```

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

```

648 \let\foreignlanguage\@secondoftwo
649 \let\textlatin\@firstofone
650 \ltx@ifundefined{language@group}{\}{\%
651   \let\bbl@info\@gobble
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 \LaTeX 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 \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

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

```
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 L^AT_EX 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 little more complicate:

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't 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 an 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 \ifHy@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 removed later.

```

758 \ifHy@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. T_EX forms ligatures in its stomach, but the PDF strings are treated only by T_EX'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{!}\textexclamdown#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 T_EX 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@unicodedefalse
817 }{%
818 \HyPsd@ToBigChars#1%
819 \HyPsd@EscapeTeX#1%
820 }%
821 \else
822 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
823 {utf16be}{pdfdoc}{%
824 \EdefEscapeString\HyPsd@temp\HyPsd@temp
825 \global\let#1\HyPsd@temp
826 \HyPsd@EscapeTeX#1%
827 \Hy@unicodedefalse
828 }{}}%
829 \fi
830 }%
831 \fi
832 \fi
833 \HyPsd@XeTeXBigCharsfalse

```

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

```

834 \pdfstringdefPostHook#1%
835 \endgroup
836 }

```

\Hy@pdfstringdef

```

837 \def\Hy@pdfstringdef#1#2{%
838 \pdfstringdef\Hy@gtemp{#2}%
839 \let#1\Hy@gtemp
840 }

```

6.3 Encodings

6.3.1 XeTeX

```

841 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
842 \catcode\z@=12 %

```

```

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

```



```

900     \fi
901   \fi
902   \lowercase{%
903     \toks@\expandafter{%
904       \the\expandafter\toks@
905       \y
906       ^^@%
907     }%
908   }%
909   \fi
910   \x
911 }%
912 }
913 \Hy@temp

```

6.3.2 Workaround for package linguex

```

914 \@ifpackageloaded{linguex}{%
915   \let\HyLinguex@OrgB\b
916   \let\HyLinguex@OrgC\c
917   \let\HyLinguex@OrgD\d
918   \def\HyLinguex@Restore{%
919     \let\b\HyLinguex@OrgB
920     \let\c\HyLinguex@OrgC
921     \let\d\HyLinguex@OrgD
922   }%
923   \Hy@AtEndOfPackage{%
924     \pdfstringdefDisableCommands{%
925       \ltx@ifundefined{oldb}{\let\b\oldb}%
926       \ltx@ifundefined{oldc}{\let\c\oldc}%
927       \ltx@ifundefined{oldd}{\let\d\oldd}%
928     }%
929   }%
930 }{%
931   \let\HyLinguex@Restore\relax
932 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

933 \def\Hy@SaveCatcodeSettings#1{%
934   \expandafter\edef\csname Hy@cat@#1\endcsname{%
935     \endlinechar=\the\endlinechar\relax
936     \catcode32 \the\catcode32\relax % (space)
937     \catcode34 \the\catcode34\relax % "
938     \catcode35 \the\catcode35\relax % #
939     \catcode37 \the\catcode37\relax % (percent)
940     \catcode40 \the\catcode40\relax % (
941     \catcode41 \the\catcode41\relax % )
942     \catcode42 \the\catcode42\relax % *
943     \catcode46 \the\catcode46\relax % .
944     \catcode58 \the\catcode58\relax % :
945     \catcode60 \the\catcode60\relax % <
946     \catcode61 \the\catcode61\relax % =
947     \catcode62 \the\catcode62\relax % >
948     \catcode64 \the\catcode64\relax % @
949     \catcode91 \the\catcode91\relax % [
950     \catcode92 \the\catcode92\relax % \
951     \catcode93 \the\catcode93\relax % ]

```

```

952 \catcode123 \the\catcode123\relax % {
953 \catcode124 \the\catcode124\relax % |
954 \catcode125 \the\catcode125\relax % }
955 }%
956 \endlinechar=-1 %
957 \catcode32 10 % (space)
958 \catcode34 12 % "
959 \catcode35 6 % #
960 \catcode37 14 % (percent)
961 \catcode40 12 % (
962 \catcode41 12 % )
963 \catcode42 12 % *
964 \catcode46 12 % .
965 \catcode58 12 % :
966 \catcode60 12 % <
967 \catcode61 12 % =
968 \catcode62 12 % >
969 \catcode91 12 % [
970 \catcode92 0 % \
971 \catcode93 12 % ]
972 \catcode123 1 % {
973 \catcode124 12 % |
974 \catcode125 2 % }
975 \makeatletter
976 }

```

\Hy@RestoreCatcodeSettings

```

977 \def\Hy@RestoreCatcodeSettings#1{%
978 \csname Hy@cat@#1\endcsname
979 \expandafter\let\csname Hy@cat@#1\endcsname\relax
980 }

```

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.

```

981 \@ifundefined{T@PD1}{%
982 \Hy@SaveCatcodeSettings{pd1}%
983 \input{pd1enc.def}%
984 \Hy@RestoreCatcodeSettings{pd1}%
985 \HyLinguex@Restore
986 }{}
987 \DeclareFontFamily{PD1}{pdf}{}
988 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
989 \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`.

```

990 \def\HyPsd@LoadUnicode{%
991   \@ifundefined{T@PU}{%
992     \Hy@SaveCatcodeSettings{pu}%
993     \input{puenc.def}%
994     \Hy@RestoreCatcodeSettings{pu}%
995     \HyLinguex@Restore
996   }{}%
997   \DeclareFontFamily{PU}{pdf}{}%
998   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
999   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
1000 \HyPsd@LoadExtra
1001 \let\HyPsd@LoadUnicode\relax
1002 }

```

`\HyPsd@LoadExtra`

```

1003 \def\HyPsd@LoadExtra{%
1004   \ifHy@psdextra
1005     \ltx@iffileloaded{puenc.def}{%
1006       \Hy@SaveCatcodeSettings{psdextra}%
1007       \input{psdextra.def}%
1008       \Hy@RestoreCatcodeSettings{psdextra}%
1009       \let\HyPsd@LoadExtra\relax
1010     }{}%
1011   \fi
1012 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```

1013 \def\texorpdfstring{%
1014   \ifHy@pdfstring
1015     \expandafter\@secondoftwo
1016   \else
1017     \expandafter\@firstoftwo
1018   \fi
1019 }

```

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`.

```

1020 \@ifundefined{pdfstringdefPreHook}{%
1021   \let\pdfstringdefPreHook\@empty
1022 }{}
1023 \@ifundefined{pdfstringdefPostHook}{%
1024   \let\pdfstringdefPostHook\@gobble
1025 }{}

```

`\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`.

```
1026 \def\pdfstringdefDisableCommands{%
1027   \begingroup
1028     \makeatletter
1029     \HyPsd@DisableCommands
1030 }
```

`\HyPsd@DisableCommands`

```
1031 \long\def\HyPsd@DisableCommands#1{%
1032   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1033   \endgroup
1034 }
```

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

```
1035 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1036 \AtBeginDocument{%
1037   \@ifundefined{pdfstringdefDisableCommands}{%
1038     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1039   }{}%
1040 }
```

`\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`.

```
1041 \def\pdfstringdefWarn#1{%
1042   \expandafter\noexpand\csname<>-string#1\endcsname
1043 }
```

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.

```

1044 \begingroup
1045 \catcode0=12 %
1046 \def\x{\endgroup
1047 \def\HyPsd@ignorespaces{%
1048 \romannumeral\expandafter`\expandafter^^@%
1049 \romannumeral`^^@%
1050 }%
1051 }%
1052 \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`.

```

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

```

```

1086 \let\Hy@temp\@empty
1087 }{%
1088 \def\HyPsd@BabelPatch{%
1089 \let\HyOrg@languageshorthands\languageshorthands
1090 }%
1091 }%
1092 }{}%
1093 }
1094 \Hy@temp
1095 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1096 \newif\ifHy@next

Nothing to do for english.
1097 \ltx@ifundefined{danish@sh@{@sel}}{}{%
1098 \def\HyPsd@babel@danish{%
1099 \declare@shorthand{danish}{"}{}%
1100 \declare@shorthand{danish}{"}~{}{}%
1101 }%
1102 }
1103 \ltx@ifundefined{dutch@sh@{@sel}}{}{%
1104 \def\HyPsd@babel@dutch{%
1105 \declare@shorthand{dutch}{"}{}%
1106 \declare@shorthand{dutch}{"}~{}{}%
1107 }%
1108 }
1109 \ltx@ifundefined{finnish@sh@{@sel}}{}{%
1110 \def\HyPsd@babel@finnish{%
1111 \declare@shorthand{finnish}{"}{}%
1112 }%
1113 }
1114 \ltx@ifundefined{french@sh@{@sel}}{}{%
1115 \def\HyPsd@babel@frenchb{%
1116 \def\guill@spacing{ }%
1117 }%
1118 }
1119 \ltx@ifundefined{german@sh@{@sel}}{}{%
1120 \def\HyPsd@babel@german{%
1121 \declare@shorthand{german}{"}f{}f}%
1122 \declare@shorthand{german}{"}|{}{}%
1123 \declare@shorthand{german}{"}~{}{}%
1124 }%
1125 }
1126 \ltx@ifundefined{macedonian@sh@{@sel}}{}{%
1127 \def\HyPsd@babel@macedonian{%
1128 \declare@shorthand{macedonian}{"}|{}{}%
1129 \declare@shorthand{macedonian}{"}~{}{}%
1130 }%
1131 }{}
1132 \ltx@ifundefined{ngerman@sh@{@sel}}{}{%
1133 \def\HyPsd@babel@ngerman{%
1134 \declare@shorthand{ngerman}{"}|{}{}%
1135 \declare@shorthand{ngerman}{"}~{}{}%
1136 }%
1137 }
1138 \ltx@ifundefined{portuges@sh@{@sel}}{}{%
1139 \def\HyPsd@babel@portuges{%
1140 \declare@shorthand{portuges}{"}|{}{}%

```

```

1141 }%
1142 }
1143 \ltx@ifundefined{russian@sh@"@sel}{-}{-}%
1144 \def\HyPsd@babel@russian{%
1145   \declare@shorthand{russian}{"}{-}%
1146   \declare@shorthand{russian}{"}{-}%
1147 }%
1148 }
1149 \ltx@ifundefined{slovene@sh@"@sel}{-}{-}%
1150 \def\HyPsd@babel@slovene{%
1151   \declare@shorthand{slovene}{"}{-}%
1152 }%
1153 }

```

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

```

1154 \ltx@ifundefined{spanish@sh@>@sel}{-}{-}%
1155 \def\HyPsd@babel@spanish{%
1156   \declare@shorthand{spanish}{<<}{\guillemotleft}%
1157   \declare@shorthand{spanish}{>>}{\guillemotright}%
1158   \declare@shorthand{spanish}{=}{-}%
1159   \declare@shorthand{spanish}{~}{-}%
1160   \declare@shorthand{spanish}{!}{\textexclamdown}%
1161   \declare@shorthand{spanish}{?}{\textquestiondown}%
1162 }%
1163 }
1164 \ltx@ifundefined{swedish@sh@"@sel}{-}{-}%
1165 \def\HyPsd@babel@swedish{%
1166   \declare@shorthand{swedish}{"}{-}%
1167   \declare@shorthand{swedish}{"}{-}%
1168 }%
1169 }
1170 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{-}%
1171 \def\HyPsd@babel@ukrainian{%
1172   \declare@shorthand{ukrainian}{"}{-}%
1173   \declare@shorthand{ukrainian}{"}{-}%
1174 }%
1175 }
1176 \ltx@ifundefined{usorbian@sh@"@sel}{-}{-}%
1177 \def\HyPsd@babel@usorbian{%
1178   \declare@shorthand{usorbian}{f}{f}%
1179   \declare@shorthand{usorbian}{"}{-}%
1180 }%
1181 }
1182 \ltx@ifundefined{greek@sh@\string~@sel}{-}{-}%
1183 \let\HyPsd@GreekPatch\@empty
1184 }%
1185 \def\HyPsd@GreekPatch{%
1186   \let\greeknumeral\HyPsd@greeknumeral
1187   \let\Greeknumeral\HyPsd@greeknumeral
1188 }%
1189 }
1190 \def\HyPsd@greeknumeral#1{%
1191   \HyPsd@GreekNum\@firstoftwo{#1}%
1192 }
1193 \def\HyPsd@greeknumeral#1{%
1194   \HyPsd@GreekNum\@secondoftwo{#1}%
1195 }
1196 \def\HyPsd@GreekNum#1#2{%

```

```

1197 \ifHy@unicode
1198 \ifnum#2<\@ne
1199 \@arabic{#2}%
1200 \else
1201 \ifnum#2<1000000 %
1202 \HyPsd@@GreekNum#1{#2}%
1203 \else
1204 \@arabic{#2}%
1205 \fi
1206 \fi
1207 \else
1208 \@arabic{#2}%
1209 \fi
1210 }
1211 \def\HyPsd@@GreekNum#1#2{%
1212 \ifnum#2<\@m
1213 \ifnum#2<10 %
1214 \expandafter\HyPsd@GreekNumI
1215 \expandafter\@gobble\expandafter#1\number#2%
1216 \else
1217 \ifnum#2<100 %
1218 \expandafter\HyPsd@GreekNumII
1219 \expandafter\@gobble\expandafter#1\number#2%
1220 \else
1221 \expandafter\HyPsd@GreekNumIII
1222 \expandafter\@gobble\expandafter#1\number#2%
1223 \fi
1224 \fi
1225 \ifnum#2>\z@
1226 \textnumeralsigngreek
1227 \fi
1228 \else
1229 \ifnum#2<\@M
1230 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1231 \else
1232 \ifnum#2<100000 %
1233 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1234 \else
1235 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1236 \fi
1237 \fi
1238 \fi
1239 }
1240 \def\HyPsd@GreekNumI#1#2#3{%
1241 #1{%
1242 \ifnum#3>\z@
1243 \textnumeralsignlowergreek
1244 \fi
1245 }%
1246 \expandafter#2%
1247 \ifcase#3 %
1248 {}{}%
1249 \or\textalpha\textAlpha
1250 \or\textbeta\textBeta
1251 \or\textgamma\textGamma
1252 \or\textdelta\textDelta
1253 \or\textepsilon\textEpsilon

```



```

1254 \or\textstigmagreek\textStigmagreek
1255 \or\textzeta\textZeta
1256 \or\texteta\textEta
1257 \or\texttheta\textTheta
1258 \else
1259 {}{}%
1260 \fi
1261 }
1262 \def\HyPsd@GreekNumII#1#2#3#4{%
1263 #1{%
1264 \ifnum#3>\z@
1265 \textnumeralsignlowergreek
1266 \fi
1267 }%
1268 \expandafter#2%
1269 \ifcase#3 %
1270 {}{}%
1271 \or\textiota\textIota
1272 \or\textkappa\textKappa
1273 \or\textlambda\textLambda
1274 \or\textmu\textMu
1275 \or\textnu\textNu
1276 \or\textxi\textXi
1277 \or\textomicron\textOmicron
1278 \or\textpi\textPi
1279 \or\textkoppagreek\textKoppagreek
1280 \else
1281 {}{}%
1282 \fi
1283 \HyPsd@GreekNumI#1#2#4%
1284 }
1285 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1286 #1{%
1287 \ifnum#3>\z@
1288 \textnumeralsignlowergreek
1289 \fi
1290 }%
1291 \expandafter#2%
1292 \ifcase#3 %
1293 {}{}%
1294 \or\extrho\textRho
1295 \or\textsigma\textSigma
1296 \or\texttau\textTau
1297 \or\textupsilon\textUpsilon
1298 \or\textphi\textPhi
1299 \or\textchi\textChi
1300 \or\textpsi\textPsi
1301 \or\textomega\textOmega
1302 \or\textsampigreek\textSampigreek
1303 \else
1304 {}{}%
1305 \fi
1306 \HyPsd@GreekNumII#1#2#4#5%
1307 }
1308 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1309 \HyPsd@GreekNumI\@firstofone#1#2%
1310 \HyPsd@@@GreekNum#1{#3#4#5}%

```

```

1311 }
1312 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1313 \HyPsd@GreekNumII\@firstofone#1#2#3%
1314 \HyPsd@@@GreekNum#1{#4#5#6}%
1315 }
1316 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1317 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1318 \HyPsd@@@GreekNum#1{#5#6#7}%
1319 }

1320 \def\HyPsd@SpanishPatch{%
1321 \ltx@ifundefined{es@save@dot}{%
1322 }{%
1323 \let\.\es@save@dot
1324 }%
1325 }

```

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

```

1326 \def\HyPsd@RussianPatch{%
1327 \ltx@ifundefined{russian@sh@"@-@}{%
1328 }{%
1329 \@namedef{russian@sh@"@-@}{-}%
1330 }%
1331 }

```

6.5.3 CJK patch

```

1332 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1333 \def\HyPsd@CJKhook{%
1334 \ltx@ifpackageloaded{CJK}{%
1335 \let\CJK@kern\relax
1336 \let\CJKkern\relax
1337 \let\CJK@CJK\relax
1338 \ifHy@CJKbookmarks
1339 \HyPsd@CJKhook@bookmarks
1340 \fi
1341 \HyPsd@CJKhook@unicode
1342 }{}%
1343 }

```

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 ($\geq 0x40$).

```

1344 \begingroup
1345 \catcode"7F=\active
1346 \toks@{%

```

```

1347 \let\CJK@ignorespaces\empty
1348 \def\CJK@char#1{\@gobbletwo}%
1349 \let\CJK@charx\@gobblefour
1350 \let\CJK@punctchar\@gobblefour
1351 \def\CJK@punctcharx#1{\@gobblefour}%
1352 \catcode"7F=\active
1353 \def^^7f#1^^7f#2^^7f{%
1354   \string #1\HyPsd@DecimalToOctal{#2}%
1355 }%
1356 % ... ?
1357 \ifHy@unicode
1358   \def\Hy@cjku{\80}%
1359 \else
1360   \let\Hy@cjku\@empty
1361 \fi
1362 \HyPsd@CJKActiveChars
1363 }%
1364 \count@=127 %
1365 \@whilenum\count@<255 \do{%
1366   \advance\count@ by 1 %
1367   \lccode`~=\count@
1368   \lowercase{%
1369     \toks@\expandafter{\the\toks@ ~}%
1370   }%
1371 }%
1372 \toks@\expandafter{\the\toks@ !}%
1373 \xdef\HyPsd@CJKhook@bookmarks{%
1374   \the\toks@
1375 }%
1376 \endgroup

```

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

```

1377 \def\HyPsd@CJKActiveChars#1{%
1378   \ifx#1!%
1379     \let\HyPsd@CJKActiveChars\relax
1380   \else
1381     \edef#1{\noexpand\Hy@cjku\string#1}%
1382   \fi
1383   \HyPsd@CJKActiveChars
1384 }

```

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

```

1385 \def\HyPsd@DecimalToOctal#1{%
1386   \ifcase #1 %
1387     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1388     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1389     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1390     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1391     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1392     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1393     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1394     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1395     \or @\or A\or B\or C\or D\or E\or F\or G%
1396     \or H\or I\or J\or K\or L\or M\or N\or O%
1397     \or P\or Q\or R\or S\or T\or U\or V\or W%
1398     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%

```

```

1399 \or \140\or a\or b\or c\or d\or e\or f\or g%
1400 \or h\or i\or j\or k\or l\or m\or n\or o%
1401 \or p\or q\or r\or s\or t\or u\or v\or w%
1402 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1403 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1404 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1405 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1406 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1407 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1408 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1409 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1410 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1411 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1412 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1413 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1414 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1415 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1416 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1417 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1418 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1419 \fi
1420 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1421 \def\HyPsd@CJKhook@unicode{%
1422 \let\Unicode\HyPsd@CJK@Unicode
1423 \let\CJKnumber\HyPsd@CJKnumber
1424 \let\CJKdigits\HyPsd@CJKdigits
1425 }

```

\HyPsd@CJK@Unicode

```

1426 \def\HyPsd@CJK@Unicode#1#2{%
1427 \ifnum#1<256 %
1428 \HyPsd@DecimalToOctalFirst{#1}%
1429 \HyPsd@DecimalToOctalSecond{#2}%
1430 \else
1431 \933%
1432 \expandafter\expandafter\expandafter\HyPsd@HighA
1433 \intcalcDiv{#1}{4}!%
1434 \933%
1435 \ifcase\intcalcMod{#1}{4} %
1436 4\or 5\or 6\or 7%
1437 \fi
1438 \HyPsd@DecimalToOctalSecond{#2}%
1439 \fi
1440 }

1441 \def\HyPsd@HighA#1!{%
1442 \expandafter\expandafter\expandafter\HyPsd@HighB
1443 \IntCalcDiv#1!64!!%
1444 \expandafter\expandafter\expandafter\HyPsd@HighD
1445 \IntCalcMod#1!64!!%
1446 }
1447 \def\HyPsd@HighB#1!{%
1448 \expandafter\expandafter\expandafter\HyPsd@HighC

```

```

1449 \IntCalcDec#1!!%
1450 }
1451 \def\HyPsd@HighC#1!{%
1452 \IntCalcDiv#1!4!%
1453 \@backslashchar
1454 \IntCalcMod#1!4!%
1455 }
1456 \def\HyPsd@HighD#1!{%
1457 \ifcase\IntCalcDiv#1!8! %
1458 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1459 \fi
1460 \ifcase\IntCalcMod#1!8! %
1461 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1462 \fi
1463 }
1464 \def\HyPsd@DecimalToOctalFirst#1{%
1465 \9%
1466 \ifcase#1 %
1467 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1468 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1469 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1470 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1471 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1472 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1473 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1474 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1475 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1476 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1477 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1478 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1479 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1480 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1481 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1482 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1483 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1484 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1485 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1486 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1487 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1488 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1489 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1490 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1491 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1492 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1493 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1494 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1495 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1496 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1497 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1498 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1499 \fi
1500 }
1501 \def\HyPsd@DecimalToOctalSecond#1{%
1502 \ifcase #1 %
1503 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1504 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1505 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%

```

```

1506 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1507 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1508 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1509 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1510 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1511 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1512 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1513 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1514 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1515 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1516 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1517 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1518 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1519 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1520 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1521 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1522 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1523 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1524 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1525 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1526 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1527 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1528 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1529 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1530 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1531 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1532 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1533 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1534 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1535 \fi
1536 }

1537 \def\HyPsd@CJKnumber#1{%
1538 \ifnum#1<\z@
1539 \CJK@minus
1540 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1541 \else
1542 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1543 \fi
1544 }

1545 \def\HyPsd@@CJKnumber#1{%
1546 \ifcase#1 %
1547 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1548 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1549 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1550 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1551 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1552 \CJK@ten\CJK@nine
1553 \else
1554 \ifnum#1<10000 %
1555 \HyPsd@CJKnumberFour#1!\@empty{20}%
1556 \@empty
1557 \else
1558 \ifnum#1<100000000 %
1559 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1560 \IntCalcDiv#1!10000!%
1561 !{ }{20}%
1562 \CJK@tenthousand

```

```

1563     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1564     \IntCalcMod#1!10000!%
1565     !\CJK@zero{10}%
1566     \@empty
1567   \else
1568     \expandafter\HyPsd@CJKnumberLarge
1569     \number\IntCalcDiv#1!100000000!\expandafter!%
1570     \number\IntCalcMod#1!100000000!!%
1571   \fi
1572 \fi
1573 \fi
1574 }
1575 \def\HyPsd@CJKnumberLarge#1!#2!{%
1576   \HyPsd@CJKnumberFour#1!{}{20}%
1577   \CJK@hundredmillion
1578   \ifnum#2=\z@
1579   \else
1580     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1581     \IntCalcDiv#2!10000!%
1582     !\CJK@zero{10}%
1583     \CJK@tenthousand
1584     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1585     \IntCalcMod#2!10000!%
1586     !\CJK@zero{10}%
1587     \@empty
1588   \fi
1589 }
1590 \def\HyPsd@CJKnumberFour#1!#2#3{%
1591   \ifnum#1=\z@
1592     \expandafter\@gobble
1593   \else
1594     \ifnum#1<1000 %
1595       #2%
1596       \HyPsd@CJKnumberThree#1!{}{#3}%
1597     \else
1598       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1599       \CJK@thousand
1600       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1601       \IntCalcMod#1!1000!%
1602       !\CJK@zero{10}%
1603     \fi
1604   \fi
1605 }
1606 \def\HyPsd@CJKnumberThree#1!#2#3{%
1607   \ifnum#1=\z@
1608   \else
1609     \ifnum#1<100 %
1610       #2%
1611       \HyPsd@CJKnumberTwo#1!{}{#3}%
1612     \else
1613       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1614       \CJK@hundred
1615       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1616       \IntCalcMod#1!100!%
1617       !\CJK@zero{10}%
1618     \fi
1619   \fi

```

```

1620 }
1621 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1622   \ifnum#1=\z@
1623   \else
1624     \ifnum#1<#3 %
1625       #2%
1626       \HyPsd@@@CJKnumber{#1}%
1627     \else
1628       \HyPsd@@@CJKnumber{\IntCalcDiv#1!10!}%
1629       \CJK@ten
1630       \ifnum\IntCalcMod#1!10!=\z@
1631       \else
1632         \HyPsd@@@CJKnumber{\IntCalcMod#1!10!}%
1633       \fi
1634     \fi
1635   \fi
1636 }

1637 \def\HyPsd@CJKdigits#1{%
1638   \ifx*#1\relax
1639     \expandafter\HyPsd@@@CJKdigits\expandafter\CJK@zero
1640   \else
1641     \HyPsd@@@CJKdigits\CJK@null{#1}%
1642   \fi
1643 }

1644 \def\HyPsd@@@CJKdigits#1#2{%
1645   \ifx\#2\%
1646   \else
1647     \HyPsd@@@@CJKdigits#1#2\@nil
1648   \fi
1649 }%

1650 \def\HyPsd@@@@CJKdigits#1#2#3\@nil{%
1651   \HyPsd@CJKdigit#1{#2}%
1652   \ifx\#3\%
1653     \expandafter\@gobble
1654   \else
1655     \expandafter\@firstofone
1656   \fi
1657   {%
1658     \HyPsd@@@@@CJKdigits#1#3\@nil
1659   }%
1660 }

1661 \def\HyPsd@CJKdigit#1#2{%
1662   \ifcase#2 %
1663     #1\or
1664     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1665     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1666   \fi
1667 }

```

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 $\text{\LaTeX} 2_{\epsilon}$ 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 (L^AT_EX 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}

1668 \def\HyPsd@inmathwarn#1#2{%
1669   \ifx#2\expandafter
1670     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1671       \HyPsd@GLYPHERR
1672       \expandafter\@gobble\string#1%
1673     >%
1674     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1675   \else
1676     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1677   \fi
1678 \else
1679   \expandafter#2%
1680 \fi
1681 }
1682 \def\HyPsd@GobbleFiFi#1\fi#2\fi{%
1683 \def\HyPsd@EndWithElse#1\else{\else}

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

```

```
1686 #2%
1687 }%
```

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`.

```
1688 \def\HyPsd@LetUnexpandableSpace#1{%
1689   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1690 }
```

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

```
1691 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

`\HyPsd@XSPACE` `\HyPsd@ITALCORR` `\HyPsd@GLYPHERR` 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.

```
1692 \edef\HyPsd@XSPACE{\string#\string X}
1693 \edef\HyPsd@ITALCORR{\string#\string I}
1694 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1695 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1696 \def\HyPsd@@hspace#1*##2\END{%
1697   \ifx\##2\%
1698     \HyPsd@hspacetest{#1}%
1699   \else
1700     \expandafter\HyPsd@hspacetest
1701   \fi
1702 }
```

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

```
1703 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```

1704 \ltx@ifundefined{tocsection}{%
1705   \let\HyPsd@AMSclassfix\relax
1706 }{%
1707   \def\HyPsd@AMSclassfix{%
1708     \let\tocpart\HyPsd@tocsection
1709     \let\tocchapter\HyPsd@tocsection
1710     \let\tocappendix\HyPsd@tocsection
1711     \let\tocsection\HyPsd@tocsection
1712     \let\tocsubsection\HyPsd@tocsection
1713     \let\tocsubsubsection\HyPsd@tocsection
1714     \let\tocparagraph\HyPsd@tocsection
1715   }%
1716   \def\HyPsd@tocsection#1#2#3{%
1717     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1718     #3%
1719   }%
1720 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1721 \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.

```

1722 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1723 \def\HyPsd@@ref#1*#2\END{%
1724   \ifx\#2\%
1725     \HyPsd@@@ref{#1}%
1726   \else
1727     \expandafter\HyPsd@@@ref
1728   \fi
1729 }%

```

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

```

1730 \def\HyPsd@@@ref#1{%
1731   \expandafter\ifx\csname r@#1\endcsname\relax
1732     ??%
1733   \else
1734     \expandafter\expandafter\expandafter
1735     \@car\csname r@#1\endcsname\@nil
1736   \fi
1737 }

```

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

```

1738 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1739 \def\HyPsd@@pageref#1*#2\END{%
1740   \ifx\#2\%
1741     \HyPsd@@@pageref{#1}%
1742   \else
1743     \expandafter\HyPsd@@@pageref

```

```

1744 \fi
1745 }

```

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

```

1746 \def\HyPsd@@@pageref#1{%
1747 \expandafter\ifx\csname r@#1\endcsname\relax
1748 ??%
1749 \else
1750 \expandafter\expandafter\expandafter\expandafter
1751 \expandafter\expandafter\expandafter\@car
1752 \expandafter\expandafter\expandafter\@gobble
1753 \csname r@#1\endcsname{}\@nil
1754 \fi
1755 }

```

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

```

1756 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1757 \def\HyPsd@@nameref#1*#2\END{%
1758 \ifx\#2\%
1759 \HyPsd@@@nameref{#1}%
1760 \else
1761 \expandafter\HyPsd@@@nameref
1762 \fi
1763 }

```

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

```

1764 \def\HyPsd@@@nameref#1{%
1765 \expandafter\ifx\csname r@#1\endcsname\relax
1766 ??%
1767 \else
1768 \expandafter\expandafter\expandafter\expandafter
1769 \expandafter\expandafter\expandafter\@car
1770 \expandafter\expandafter\expandafter\@gobbletwo
1771 \csname r@#1\endcsname{}\@nil
1772 \fi
1773 }

```

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

```

1774 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1775 \def\HyPsd@@autoref#1*#2\END{%
1776 \ifx\#2\%
1777 \HyPsd@@@autoref{#1}%
1778 \else
1779 \expandafter\HyPsd@@@autoref
1780 \fi
1781 }

```

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

```

1782 \def\HyPsd@@@autoref#1{%
1783 \expandafter\ifx\csname r@#1\endcsname\relax

```

```

1784   ??%
1785   \else
1786     \expandafter\expandafter\expandafter\HyPsd@autorefname
1787       \csname r@#1\endcsname\}\}\}\}\@nil
1788     \expandafter\expandafter\expandafter
1789     \@car\csname r@#1\endcsname\@nil
1790   \fi
1791 }

```

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

```

1792 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1793   \ifx\#4\%
1794   \else
1795     \HyPsd@@autorefname#4.\@nil
1796   \fi
1797 }

```

`\HyPsd@@autorefname`

```

1798 \def\HyPsd@@autorefname#1.#2\@nil{%
1799   \ltx@ifundefined{#1autorefname}{%
1800     \ltx@ifundefined{#1name}{%
1801       }{%
1802         \csname#1name\endcsname\space
1803       }%
1804     }{%
1805       \csname#1autorefname\endcsname\space
1806     }%
1807 }

```

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 1808 \begingroup
1809   \def\x#1#2{%
1810     \endgroup
1811     \let#1\def
1812     \def\HyPsd@DefCommand##1##2###{%
1813       #1%
1814       \expandafter\noexpand
1815       \csname\expandafter\@gobble\string##1\@empty\endcsname
1816       \@gobble
1817     }%
1818     \let#2\let
1819     \def\HyPsd@@LetCommand##1{%
1820       \expandafter\ifx\csname##1\expandafter\endcsname
1821         \csname iftrue\endcsname
1822       \pdfstringdefWarn\let
1823       \expandafter\@gobble
1824     \else
1825       \expandafter\ifx\csname##1\expandafter\endcsname
1826         \csname iffalse\endcsname
1827       \pdfstringdefWarn\let
1828       \expandafter\expandafter\expandafter\@gobble
1829     \else
1830       #2%
1831       \expandafter\noexpand
1832       \csname##1\expandafter\expandafter\expandafter\endcsname
1833     \fi
1834   \fi
1835 }%
1836 }%
1837 \expandafter\x\csname <def>-command\expandafter\endcsname
1838   \csname <let>-command\endcsname
1839 \def\HyPsd@LetCommand#1{%
1840   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1841   \expandafter\expandafter\expandafter{%
1842     \expandafter\@gobble\string#1\@empty
1843   }%
1844 }

```

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).

```

1845 \def\HyPsd@ifnextchar#1{%
1846   \pdfstringdefWarn#1%

```

```

1847 \expandafter\@gobbletwo\@gobble
1848 }

```

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`.

```

1849 \def\HyPsd@protected@testopt#1{%
1850   \pdfstringdefWarn#1%
1851   \@gobbletwo
1852 }

```

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:

```

1853 \def\HyPsd@Warning#1{%
1854   \begingroup
1855   \let\space\ltx@space
1856   \Hy@Warning{#1}%
1857   \endgroup
1858 }

```

6.6.2 Protecting spaces

```

1859 \RequirePackage{etexcmds}[2007/09/09]
1860 \ifetex@unexpanded
1861   \expandafter\@secondoftwo
1862 \else
1863   \expandafter\@firstoftwo
1864 \fi
1865 {%

```

`\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`.

```

1866   \def\HyPsd@ProtectSpaces#1{%
1867     \iftrue
1868       \expandafter\HyPsd@@ProtectSpacesFi
1869       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1870     \fi
1871   }%

```

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

```

1872   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1873     \fi
1874     \ifx\scrollmode#2\scrollmode

```

```

1875 \HyPsd@RemoveMask#1\HyPsd@End#3%
1876 \else
1877 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1878 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1879 \fi
1880 }%

```

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.

```

1881 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1882 \toks\expandafter{#1}%
1883 \xdef#2{\the\toks@}%
1884 }%

1885 }{%
1886 \let\HyPsd@fi\fi
1887 \def\HyPsd@ProtectSpaces#1{%
1888 \xdef#1{%
1889 \iftrue
1890 \expandafter\HyPsd@@ProtectSpacesFi
1891 \expandafter|\expandafter\@empty#1| %
1892 \HyPsd@fi
1893 }%
1894 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1895 }%
1896 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1897 \fi
1898 \etex@unexpanded{#1}%
1899 \ifx\scrollmode#2\scrollmode
1900 \else
1901 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1902 \HyPsd@fi
1903 }%
1904 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1905 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1906 }%
1907 }

```

6.6.3 Remove grouping braces

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

```

1908 \def\HyPsd@RemoveBraces#1{%
1909 \ifx\scrollmode#1\scrollmode
1910 \else
1911 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1912 \fi
1913 }

```

`\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`.

```

1914 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1915   \fi
1916   \def\Hy@temp@A{#1#2}%
1917   \def\Hy@temp@B{#3}%
1918   \ifx\Hy@temp@A\Hy@temp@B
1919     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1920       \HyPsd@String#1%
1921     }%
1922     \ifx\scrollmode#2\scrollmode
1923     \else
1924       \Hy@ReturnAfterFiFiEnd{%
1925         \HyPsd@RemoveBraces{#2}%
1926       }%
1927     \fi
1928   \else
1929     \def\Hy@temp@A{#1}%
1930     \HyPsd@AppendItalcorr\HyPsd@String
1931     \ifx\Hy@temp@A\@empty
1932       \Hy@ReturnAfterElseFiFiEnd{%
1933         \HyPsd@RemoveBraces{#2}%
1934       }%
1935     \else
1936       \HyPsd@ProtectSpaces\Hy@temp@A
1937       \HyPsd@AppendItalcorr\Hy@temp@A
1938       \Hy@ReturnAfterFiFiEnd{%
1939         \expandafter\HyPsd@RemoveBraces\expandafter
1940           {\Hy@temp@A#2}%
1941       }%
1942     \fi
1943   \fi
1944   \Hy@ReturnEnd
1945 }
```

`\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`.

```

1946 \def\HyPsd@AppendItalcorr#1{%
1947   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1948 }
1949 \def\HyPsd@@AppendItalcorr#1#2{%
1950   \expandafter\def\expandafter#2\expandafter{#2#1}%
1951 }
```

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>.

```

1952 \ltx@ifundefined{directlua}{%
1953 }{%
1954   \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`.

```

1956 \begingroup
1957   \catcode`\Q=\active
1958   \let Q\ltx@empty
1959   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1960     \global\let\HyPsd@Rest\relax
1961     \ifcat\relax\noexpand#1\relax
1962       \ifx#1\protect
1963         \else
1964           \ifx#1\penalty
1965             \setbox\z@=\hbox{%
1966               \afterassignment\HyPsd@AfterCountRemove
1967               \count@=#2\HyPsd@End
1968             }%
1969           \else
1970             \ifx#1\kern
1971               \setbox\z@=\hbox{%
1972                 \afterassignment\HyPsd@AfterDimenRemove
1973                 \dimen@=#2\HyPsd@End
1974               }%
1975             \else
1976               \ifx#1\hskip
1977                 \setbox\z@=\hbox{%
1978                   \afterassignment\HyPsd@AfterSkipRemove
1979                   \skip@=#2\HyPsd@End
1980                 }%
1981               \else
1982                 \HyPsd@CatcodeWarning{#1}%
1983               \fi
1984             \fi
1985           \fi
1986         \fi
1987       \else
1988         \ifcat\noexpand#1\noexpandQ% active character
1989           \expandafter\expandafter\expandafter\def
1990             \expandafter\expandafter\expandafter\HyPsd@String
1991             \expandafter\expandafter\expandafter{%
1992               \expandafter\HyPsd@String\string#1%
1993             }%
1994         \else
1995           \ifcat#1A% letter

```

```

1996     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997     \HyPsd@String#1%
1998     }%
1999     \else
2000     \ifcat#1 % SPACE
2001     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2002     \HyPsd@String\HyPsd@SPACEOPTI
2003     }%
2004     \else
2005     \ifcat$#1%
2006     \HyPsd@CatcodeWarning{math shift}%
2007     \else
2008     \ifcat&#1%
2009     \HyPsd@CatcodeWarning{alignment tab}%
2010     \else
2011     \ifcat^#1%
2012     \HyPsd@CatcodeWarning{superscript}%
2013     \else
2014     \ifcat_#1%
2015     \HyPsd@CatcodeWarning{subscript}%
2016     \else
2017     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2018     \HyPsd@String#1%
2019     }%
2020     \fi
2021     \fi
2022     \fi
2023     \fi
2024     \fi
2025     \fi
2026     \fi
2027     \fi
2028     \ifx\HyPsd@Rest\relax
2029     \ifx\scrollmode#2\scrollmode
2030     \else
2031     \Hy@ReturnAfterFiFiEnd{%
2032     \HyPsd@CheckCatcodes#2\HyPsd@End
2033     }%
2034     \fi
2035     \else
2036     \ifx\HyPsd@Rest\@empty
2037     \else
2038     \Hy@ReturnAfterFiFiEnd{%
2039     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2040     }%
2041     \fi
2042     \fi
2043     \Hy@ReturnEnd
2044     }%
2045 \endgroup

```

Remove counts, dimens, skips.

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

```

2046 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2047   \gdef\HyPsd@Rest{#1}%
2048 }

```

`\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.

```

2049 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2050   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2051     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2052     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2053   \else
2054     \ifdim\dimen@=\z@
2055     \else
2056       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2057     \fi
2058     \gdef\HyPsd@Rest{#1}%
2059   \fi
2060 }
```

`\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).

```

2061 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2062   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2063     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2064     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2065   \else
2066     \ifdim\skip@=\z@
2067     \else
2068       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2069     \fi
2070     \gdef\HyPsd@Rest{#1}%
2071   \fi
2072 }
```

Catcode warnings.

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

```

2073 \def\HyPsd@CatcodeWarning#1{%
2074   \HyPsd@Warning{%
2075     Token not allowed in a PDF string (%
2076     \ifHy@unicode
2077       Unicode%
2078     \else
2079       PDFDocEncoding%
2080     \fi
2081     ):%
2082     \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'%
2083   }%
2084 }
2085 \begingroup
2086   \catcode\|=0 %
2087   \catcode\=12 %
2088   \gdef\HyPsd@RemoveCmdPrefix#1{%
2089     \expandafter\HyPsd@@RemoveCmdPrefix
2090     \string#1\@empty\<>-|\@empty|\@empty
2091   }%
2092   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2093 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
2094 \def\HyPsd@RemoveSpaceWarning#1{%
2095   \HyPsd@Warning{%
2096     Token not allowed in a PDF string (%
2097     \ifHy@unicode
2098       Unicode%
2099     \else
2100       PDFDocEncoding%
2101     \fi
2102   ):%
2103   \MessageBreak #1\MessageBreak
2104   removed%
2105 }%
2106 }
```

\HyPsd@ReplaceSpaceWarning

```
2107 \def\HyPsd@ReplaceSpaceWarning#1{%
2108   \HyPsd@Warning{%
2109     Token not allowed in a PDF string (%
2110     \ifHy@unicode
2111       Unicode%
2112     \else
2113       PDFDocEncoding%
2114     \fi
2115   ):%
2116   \MessageBreak #1\MessageBreak
2117   replaced by space%
2118 }%
2119 }
```

6.6.5 Check for wrong glyphs

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

```
2120 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2121   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2122     \HyPsd@String#1%
2123   }%
2124   \ifx\#2\%
2125   \else
2126     \ltx@ReturnAfterFi{%
2127       \HyPsd@GlyphProcessWarning#2\@empty
2128     }%
2129   \fi
2130 }
2131 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2132   \HyPsd@@@GlyphProcessWarning#1++>%
2133   \HyPsd@GlyphProcess#2\@empty
2134 }
2135 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2136   \ifx\#2\%
2137     \HyPsd@Warning{%
2138       Glyph not defined in %
2139       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2140       removing \@backslashchar#1'%
2141     }%
2142   \else
```

```

2143 \HyPsd@Warning{%
2144   Composite letter ``\@backslashchar#1+#2'\MessageBreak
2145   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2146   \MessageBreak
2147   removing ``\@backslashchar#1'%
2148 }%
2149 \fi
2150 }

```

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`.

```

2151 \def\HyPsd@spaceopti#1{ % first space
2152 \ifx\HyPsd@spaceopti#1%
2153   \040%
2154 \else
2155   #1%
2156 \fi
2157 }%

```

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.

```

2158 \def\HyPsd@Subst#1#2#3{%
2159 \def\HyPsd@@@ReplaceFi##1#1##2\END\fi{%
2160   \fi
2161   ##1%
2162   \ifx\scrollmode##2\scrollmode
2163   \else
2164     #2%
2165     \HyPsd@@@ReplaceFi##2\END
2166   \fi
2167 }%
2168 \xdef#3{%
2169   \iftrue
2170     \expandafter\HyPsd@@@ReplaceFi#3#1\END
2171   \fi
2172 }%
2173 }

```

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

```

2174 \def\HyPsd@StringSubst#1{%
2175 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2176 }

```

`\HyPsd@EscapeTeX`

```

2177 \begingroup

```

```

2178 \lccode`\!=`\%%
2179 \lccode`\|=`\%%
2180 \lccode`\(<`\{%
2181 \lccode`\)=`\}%
2182 \lccode`0=\ltx@zero
2183 \lccode`1=\ltx@zero
2184 \lccode`3=\ltx@zero
2185 \lccode`4=\ltx@zero
2186 \lccode`5=\ltx@zero
2187 \lccode`7=\ltx@zero
2188 \lowercase{\endgroup
2189 \def\HyPsd@EscapeTeX#1{%
2190   \HyPsd@Subst!{|045}#1%
2191   \HyPsd@Subst(|173}#1%
2192   \HyPsd@Subst){|175}#1%
2193 }%
2194 }

```

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.

```

2195 \def\HyPsd@doxspace#1{%
2196   \ifx#1\relax\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                     \ifx#1'\else
2206                       \HyPsd@SPACEOPTI
2207                     \fi
2208                   \fi
2209                 \fi
2210               \fi
2211             \fi
2212           \fi
2213         \fi
2214       \fi
2215     \fi
2216   \fi
2217   #1%
2218 }%

```

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.

```

2219 \begingroup
2220 \catcode`\|=0 %
2221 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```
2222 |gdef|HyPsd@ConvertToUnicode#1{%
2223 |xdef#1{%
2224 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2225 }%
2226 |ifx#1|@empty
2227 |else
2228 |xdef#1{%
2229 \376\377%
2230 #1%
2231 }%
2232 |fi
2233 }%
```

\HyPsd@DoConvert

```
2234 |gdef|HyPsd@DoConvert#1{%
2235 |ifx#1|@empty
2236 |else
2237 |ltx@ReturnAfterFi{%
2238 |ifx#1\%%
2239 \%%
2240 |expandafter|HyPsd@DoEscape
2241 |else
2242 |HyPsd@Char{#1}%
2243 |expandafter|HyPsd@DoConvert
2244 |fi
2245 }%
2246 |fi
2247 }%
```

\HyPsd@DoEscape

```
2248 |gdef|HyPsd@DoEscape#1{%
2249 |ifx#19%
2250 |expandafter|HyPsd@GetTwoBytes
2251 |else
2252 |ltx@ReturnAfterFi{%
2253 |ifx#18%
2254 00%
2255 |expandafter|HyPsd@GetTwoBytes
2256 |else
2257 #1%
2258 |expandafter|HyPsd@GetOneByte
2259 |fi
2260 }%
2261 |fi
2262 }%
```

\HyPsd@GetTwoBytes

```
2263 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2264 #1\#2#3#4%
2265 |HyPsd@DoConvert
2266 }%
```

\HyPsd@GetOneByte

```
2267 |gdef|HyPsd@GetOneByte#1#2{%
2268 #1#2%
2269 |HyPsd@DoConvert
```



```

2270 }%
2271 |endgroup

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more
arguments.
2272 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2273 \xdef#4{#4#1#2}%
2274 \HyPsd@@ConvertToUnicode#3\END#4%
2275 }

\HyPsd@Char
2276 \begingroup
2277 \catcode0=9 %
2278 \catcode`\^=7 %
2279 \catcode`\^^=12 %
2280 \def\x{^^^0000}%
2281 \expandafter\endgroup
2282 \ifx\x\@empty
2283 \def\HyPsd@Char#1{%
2284 \ifnum`#1<128 %
2285 \@backslashchar 000#1%
2286 \else
2287 \ifnum`#1<65536 %
2288 \expandafter\HyPsd@CharTwoByte\number`#1!%
2289 \else
2290 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2291 \intcalcSub{`#1}{65536}!%
2292 \fi
2293 \fi
2294 }%
2295 \def\HyPsd@CharTwoByte#1!{%
2296 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2297 \IntCalcDiv#1!256!!%
2298 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2299 \IntCalcMod#1!256!!%
2300 }%
2301 \def\HyPsd@CharOctByte#1!{%
2302 \@backslashchar
2303 \IntCalcDiv#1!64!%
2304 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2305 \IntCalcMod#1!8!%
2306 }%
2307 \def\HyPsd@CharSurrogate#1!{%
2308 \@backslashchar 33%
2309 \IntCalcDiv#1!262144!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2312 \@backslashchar 33%
2313 \expandafter\expandafter\expandafter\IntCalcAdd
2314 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2315 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2316 \IntCalcMod#1!256!!%
2317 }%
2318 \else
2319 \def\HyPsd@Char#1{%
2320 \@backslashchar 000#1%
2321 }%
2322 \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

2323 \begingroup\expandafter\expandafter\expandafter\endgroup
2324 \expandafter\ifx\csname numexpr\endcsname\relax
2325   \let\HyPsd@UTFviii\relax
2326 \else
2327   \begingroup
2328     \lccode`\~=`^^f4\relax
2329   \lowercase{\endgroup
2330     \def\HyPsd@UTFviii{%
2331       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2332       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2333       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2334       \ifx~\HyPsd@UTFviii@ccxliv@undef
2335         \let~\HyPsd@UTFviii@ccxliv@def
2336       \fi
2337       \let\unichar\HyPsd@unichar
2338     }%
2339   }%
2340   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2341   \edef\HyPsd@UTFviii@ccxliv@def{%
2342     \noexpand\UTFviii@four@octets\string ^^f4%
2343   }%

```

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.

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

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

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

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

$$(5)$$

```

2344 \def\HyPsd@UTFviii@two#1#2{%
2345   \expandafter\HyPsd@UTFviii@@two
2346   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2347   \number`#1\expandafter| %
2348   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
2349   \number`#2 \@nil
2350 }%
2351 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2352   \expandafter\8%
2353   \number\numexpr #1-48\expandafter\relax
2354   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2355   \number\numexpr #3-8*%

```

```

2356 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2357 \number\numexpr #4-8*#3\relax
2358 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2359 \def\HyPsd@UTFviii@three#1#2#3{%
2360 \expandafter\HyPsd@UTFviii@@three
2361 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2362 \number`#1\expandafter|
2363 \number\ifnum\dimexpr`#2-128\relax <32 0\else 1\fi\expandafter|
2364 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
2365 \number`#2\expandafter|
2366 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
2367 \number`#3 \@nil
2368 }%
2369 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2370 \expandafter\9%
2371 \number\dimexpr #1-56\expandafter\relax
2372 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2373 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2374 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2375 \number\dimexpr #6-16\expandafter\relax
2376 \number\dimexpr #7-8*#6\relax
2377 }%

```

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

```

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

```

```

2378 \def\HyPsd@UTFviii@four#1#2{%
2379 \expandafter\HyPsd@@UTFviii@four\number
2380 \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2381 \expandafter|\number
2382 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2383 }%
2384 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2385 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2386 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2387 \ifodd#2 %
2388 \number\dimexpr(#2-1)/2\relax
2389 \else
2390 \number\dimexpr#2/2\relax
2391 \fi

```

```

2392 \number\numexpr\ifodd#2 4+\fi
2393 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2394 \933%
2395 \expandafter\HyPsd@@@UTFviii@four\number
2396 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2397 }%
2398 \def\HyPsd@@@UTFviii@four#1|#2{%
2399 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2400 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2401 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2402 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2403 }%

```

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

```

2404 \def\HyPsd@unichar#1{%
2405 \ifHy@unicode
2406 \ifnum#1>"10FFFF %
2407 \HyPsd@UnicodeReplacementCharacter % illegal
2408 \else
2409 \ifnum#1>"FFFF %

```

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

```

2410 \expandafter\HyPsd@unichar\expandafter{%
2411 \number\numexpr 55296+%
2412 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%

```

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

```

2415 \expandafter\HyPsd@unichar\expandafter{%
2416 \number\numexpr#1-9216%
2417 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2418 \relax\relax\relax
2419 }%
2420 \else
2421 \ifnum#1>"7FF %
2422 \9%
2423 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2424 \number
2425 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2426 }%
2427 \else
2428 \8%
2429 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2430 \fi
2431 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2432 \number
2433 \numexpr#1-256*\number
2434 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2435 }%
2436 \fi
2437 \fi
2438 \else
2439 .% unsupported (Unicode -> PDF Doc Encoding)
2440 \fi
2441 }%
2442 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2443 \def\HyPsd@unichar@first@byte#1{%
2444   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2445   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2446     \number
2447     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2448     \relax\relax\relax
2449   }%
2450 }%
2451 \def\HyPsd@unichar@second@byte#1{%
2452   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2453   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2454     \number
2455     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2456     \relax\relax\relax
2457   }%
2458 }%
2459 \def\HyPsd@unichar@octtwo#1{%
2460   \number\dimexpr.125\dimexpr#1sp\relax\relax
2461   \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2462   \relax\relax\relax
2463 }%
2464 \fi

```

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

```

2465 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2466   \ifx\@gobble#1%
2467   \else
2468     [Please insert \textbackslash PrerenderUnicode%
2469     \textbraceleft#1\textbraceright\space
2470     into preamble]%
2471   \fi
2472 }%

```

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.

```

2473 \def\HyPsd@DieFace#1{%
2474   \ifHy@unicode
2475   \ifnum#1<1 %
2476     \HyPsd@UnicodeReplacementCharacter
2477   \else
2478     \ifnum#1>6 %
2479       \9046\205%
2480       \expandafter\expandafter\expandafter
2481       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2482     \else
2483       \9046\20\intcalcDec{#1}%
2484     \fi

```

```

2485 \fi
2486 \else
2487 .% Die faces are not part of PDFDocEncoding
2488 \fi
2489 }

```

\HyPsd@DieFaceLarge

```

2490 \def\HyPsd@DieFaceLarge#1{%
2491 \ifnum#1>6 %
2492 \expandafter\ltx@firstoftwo
2493 \else
2494 \expandafter\ltx@secondoftwo
2495 \fi
2496 {%
2497 \9046\205%
2498 \expandafter\expandafter\expandafter
2499 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2500 }{%
2501 \9046\20\IntCalcDec#1!%
2502 }%
2503 }

```

6.6.11 Support for moon phases of package china2e

```

2504 \def\HyPsd@MoonPha#1{%
2505 \ifcase\intcalcNum{#1} %
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 1
2508 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2509 \9330\074\9337\032%
2510 \or % 2
2511 \HyPsd@UnicodeReplacementCharacter
2512 \or % 3
2513 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2514 \9330\074\9337\035%
2515 \or % 4
2516 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2517 \9330\074\9337\034%
2518 \else
2519 \HyPsd@UnicodeReplacementCharacter
2520 \fi
2521 }
2522 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2523 \def\HyPsd@ding#1{%
2524 \ifHy@unicode
2525 \ifnum#1<32 %
2526 \HyPsd@UnicodeReplacementCharacter
2527 \else
2528 \ifnum#1>254 %
2529 \HyPsd@UnicodeReplacementCharacter
2530 \else
2531 \ifnum#1<127 %
2532 \expandafter\expandafter\expandafter
2533 \HyPsd@@@ding\intcalcNum{#1}!%

```

```

2534     \else
2535     \ifnum#1>160 %
2536     \expandafter\expandafter\expandafter
2537     \HyPsd@@ding\intcalcNum{#1}!%
2538     \else
2539     \HyPsd@UnicodeReplacementCharacter
2540     \fi
2541     \fi
2542     \fi
2543     \fi
2544     \else
2545     .% Dingbats are not part of PDFDocEncoding
2546     \fi
2547 }

```

\HyPsd@@ding

```

2548 \def\HyPsd@@ding#1!{%
2549 \ltx@ifundefined{HyPsd@ding@#1}{%
2550 \ifnum#1<127 %
2551 \9047%
2552 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2553 \else
2554 \ifnum#1<168 %
2555 \9047\14\IntCalcSub#1!160!%
2556 \else
2557 \ifnum#1>181 %
2558 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2559 \else
2560 % 172..181 -> U+2460..U+2469
2561 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2562 \fi
2563 \fi
2564 \fi
2565 }{%
2566 \csname HyPsd@ding@#1\endcsname
2567 }%
2568 }

2569 \@namedef{HyPsd@ding@32}{\space}
2570 % U+260E BLACK TELEPHONE
2571 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2572 % U+261B BLACK RIGHT POINTING INDEX
2573 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2574 % U+261E WHITE RIGHT POINTING INDEX
2575 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2576 % U+2605 BLACK STAR
2577 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2578 % U+25CF BLACK CIRCLE
2579 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2580 % U+25A0 BLACK SQUARE
2581 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2582 % U+25B2 BLACK UP-POINTING TRIANGLE
2583 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2584 % U+25BC BLACK DOWN-POINTING TRIANGLE
2585 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2586 % U+25C6 BLACK DIAMOND
2587 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2588 % U+25D7 RIGHT HALF BLACK CIRCLE

```

```

2589 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2590 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2591 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2592 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2593 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2594 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2595 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2596 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2597 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2598 \@ifclassloaded{memoir}{%
2599   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2600 }{}

```

7.2 Package subfigure

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

```

2601 \@ifpackageloaded{subfigure}{%
2602   \ltx@ifundefined{sub@label}{%
2603     \Hy@hypertextnamesfalse
2604   }{%
2605     \renewcommand*{\sub@label}[1]{%
2606       \@bsphack
2607       \subfig@oldlabel{#1}%
2608       \if@filesw
2609         \begingroup
2610           \edef\@currentlabstr{%
2611             \expandafter\strip@prefix\meaning\@currentlabelname
2612           }%
2613           \protected@write\@auxout{}{%
2614             \string\newlabel{sub@#1}{%
2615               {\@nameuse{\@thesub\@capytype}}%
2616               {\thepage}%
2617             }%
2618             \expandafter\strip@period\@currentlabstr
2619             \relax.\relax\@@@%
2620           }%
2621           {\@currentHref}%
2622           {}%
2623         }%
2624       }%
2625     \endgroup
2626     \fi
2627     \@esphack
2628   }%
2629   \@ifpackagelater{subfigure}{2002/03/26}{%
2630     \providecommand*{\toclevel@subfigure}{1}%
2631     \providecommand*{\toclevel@subtable}{1}%
2632   }%
2633 }%
2634 }{}

```


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:

```
2635 \ltx@ifundefined{XR@addURL}{%
2636 }{%
```

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.

```
2637 \def\xR@addURL#1{\xR@dURL#1{}{}{}%
2638 \def\xR@dURL#1#2#3#4#5\{%
2639   {#1}{#2}%
2640   \if!#4!%
2641   \else
2642     {#3}{#4}{\xR@URL}%
2643   \fi
2644 }%
2645 }
```

```
2646 \def\Hy@true{true}
2647 \def\Hy@false{false}
```

Providing dummy definitions.

```
2648 \let\literalps@out\@gobble
2649 \newcommand\pdfbookmark[3]{}{}
2650 \def\Acrobatmenu#1#2{\leavevmode#2}
2651 \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

```
2652 \let\HyperRaiseLinkHook\@empty
2653 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2654 \newcount\Hy@SavedSpaceFactor
2655 \def\Hy@SaveSpaceFactor{%
2656   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2657 }
2658 \def\Hy@RestoreSpaceFactor{%
2659   \relax
2660   \ifhmode
2661     \ifnum\Hy@SavedSpaceFactor>\z@
2662       \spacefactor=\Hy@SavedSpaceFactor
2663     \fi
2664   \fi
```

```

2665 }
2666 \def\Hy@SaveSavedSpaceFactor{%
2667 \edef\Hy@RestoreSavedSpaceFactor{%
2668 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2669 }%
2670 }
2671 \def\Hy@raisedlink#1{%
2672 \ifvmode
2673 #1%
2674 \else
2675 \Hy@SaveSpaceFactor
2676 \penalty\@M
2677 \smash{%
2678 \begingroup
2679 \let\HyperRaiseLinkLength\@tempdima
2680 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2681 \HyperRaiseLinkHook
2682 \expandafter\endgroup
2683 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2684 \Hy@RestoreSpaceFactor
2685 #1%
2686 \Hy@SaveSpaceFactor
2687 }%
2688 }%
2689 \Hy@RestoreSpaceFactor
2690 \fi
2691 }

```

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

```

2692 \def\Hy@SaveLastskip{%
2693 \let\Hy@RestoreLastskip\relax
2694 \ifvmode
2695 \ifdim\lastskip=\z@
2696 \let\Hy@RestoreLastskip\nobreak
2697 \else
2698 \begingroup
2699 \skip@=-\lastskip
2700 \edef\x{%
2701 \endgroup
2702 \def\noexpand\Hy@RestoreLastskip{%
2703 \noexpand\ifvmode
2704 \noexpand\nobreak
2705 \vskip\the\skip@
2706 \vskip\the\lastskip\relax
2707 \noexpand\fi
2708 }%
2709 }%
2710 \x
2711 \fi
2712 \else
2713 \ifhmode
2714 \ifdim\lastskip=\z@
2715 \let\Hy@RestoreLastskip\nobreak
2716 \else
2717 \begingroup
2718 \skip@=-\lastskip
2719 \edef\x{%

```

```

2720         \endgroup
2721         \def\noexpand\Hy@RestoreLastskip{%
2722             \noexpand\ifhmode
2723             \noexpand\nobreak
2724             \hskip\the\skip@
2725             \hskip\the\lastskip\relax
2726             \noexpand\fi
2727         }%
2728     }%
2729     \x
2730     \fi
2731     \fi
2732     \fi
2733 }%

```

9 Options

```

2734 \SetupKeyvalOptions{%
2735     family=Hyp,%
2736     prefix=HyOpt%
2737 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2738 \def\IfHyperBooleanExists#1{%
2739     \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2740         \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2741     }%
2742 }

2743 \@namedef{KV@Hyp@stoppeearly@default}{ }

```

`\IfHyperBoolean`

```

2744 \def\IfHyperBoolean#1{%
2745     \IfHyperBooleanExists{#1}{%
2746         \csname ifHy@#1\endcsname
2747         \expandafter\ltx@firstoftwo
2748     \else
2749         \expandafter\ltx@secondoftwo
2750     \fi
2751 } \ltx@secondoftwo
2752 }

```

`\Hy@boolkey`

```

2753 \def\Hy@boolkey#1#2{%
2754     \edef\Hy@tempa{#2}%
2755     \lowercase\expandafter{%
2756         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2757     }%
2758     \ifx\Hy@tempa\@empty
2759         \let\Hy@tempa\Hy@true
2760     \fi
2761     \ifx\Hy@tempa\Hy@true
2762     \else
2763         \ifx\Hy@tempa\Hy@false
2764         \else

```

```

2765 \let\Hy@tempa\relax
2766 \fi
2767 \fi
2768 \ifx\Hy@tempa\relax
2769 \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2770 \else
2771 \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2772 \csname Hy@#1\Hy@tempa\endcsname
2773 \fi
2774 }

```

\Hy@WarnOptionValue

```

2775 \def\Hy@WarnOptionValue#1#2#3{%
2776 \Hy@Warning{%
2777 Unexpected value `#1'\MessageBreak
2778 of option `#2' instead of\MessageBreak
2779 #3%
2780 }%
2781 }

```

\Hy@DisableOption

```

2782 \def\Hy@DisableOption#1{%
2783 \ltx@ifundefined{KV@Hyp@#1@default}{%
2784 \define@key{Hyp}{#1}%
2785 }{%
2786 \define@key{Hyp}{#1}[]%
2787 }%
2788 {\Hy@WarnOptionDisabled{#1}}%
2789 }
2790

```

\Hy@WarnOptionDisabled

```

2791 \def\Hy@WarnOptionDisabled#1{%
2792 \Hy@Warning{%
2793 Option `#1' has already been used,\MessageBreak
2794 setting the option has no effect%
2795 }%
2796 }

```

\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.

```

2797 \def\Hy@CheckOptionValue#1#2#3{%
2798 \begingroup
2799 \edef\x{#1}%
2800 \@onelevel@sanitize\x
2801 \let\y=y%
2802 \def\do##1##2{%
2803 \def\z{##1}%
2804 \@onelevel@sanitize\z
2805 \ifx\x\z
2806 \let\y=n%
2807 \let\do\@gobbletwo
2808 \fi
2809 }%
2810 #3%
2811 \ifx\y y%

```

```

2812 \def\do##1##2{%
2813   * `##1'%
2814   \ifx\\##2\\\else\space(##2)\fi
2815   \MessageBreak
2816 }%
2817 \Hy@Warning{%
2818   Values of option `#2':\MessageBreak
2819   #3%
2820   * An empty value disables the option.\MessageBreak
2821   Unknown value `x'%
2822 }%
2823 \fi
2824 \endgroup
2825 }

```

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

```

2826 \def\Hy@DefNameKey#1{%
2827   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2828 }

```

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

```

2829 \def\Hy@@DefNameKey#1#2#3{%
2830   \define@key{Hyp}{#2}{%
2831     \edef#1{##1}%
2832     \ifx#1\@empty
2833     \else
2834       \Hy@CheckOptionValue{##1}{#2}{#3}%
2835     \fi
2836   }%
2837   \let#1\@empty
2838 }

```

`\Hy@UseNameKey`

```

2839 \def\Hy@UseNameKey#1#2{%
2840   \ifx#2\@empty
2841   \else
2842     /#1/#2%
2843   \fi
2844 }

```

9.2 Defining the options

```

2845 \define@key{Hyp}{implicit}[true]{%
2846   \Hy@boolkey{implicit}{#1}%
2847 }
2848 \define@key{Hyp}{draft}[true]{%
2849   \Hy@boolkey{draft}{#1}%
2850 }
2851 \define@key{Hyp}{final}[true]{%
2852   \Hy@boolkey{final}{#1}%
2853 }
2854 \let\KV@Hyp@nolinks\KV@Hyp@draft

```

```

2855 \def\Hy@ObsoletePaperOption#1{%
2856   \Hy@WarningNoLine{%
2857     Option `#1' is no longer used%
2858   }%
2859   \define@key{Hyp}{#1}[true]{}%
2860 }
2861 \def\Hy@temp#1{%
2862   \define@key{Hyp}{#1}[true]{%
2863     \Hy@ObsoletePaperOption{#1}%
2864   }%
2865 }
2866 \Hy@temp{a4paper}
2867 \Hy@temp{a5paper}
2868 \Hy@temp{b5paper}
2869 \Hy@temp{letterpaper}
2870 \Hy@temp{legalpaper}
2871 \Hy@temp{executivepaper}

2872 \define@key{Hyp}{setpagesize}[true]{%
2873   \Hy@boolkey{setpagesize}{#1}%
2874 }
2875 \define@key{Hyp}{debug}[true]{%
2876   \Hy@boolkey{debug}{#1}%
2877 }
2878 \define@key{Hyp}{linktocpage}[true]{%
2879   \Hy@boolkey{linktocpage}{#1}%
2880   \ifHy@linktocpage
2881     \let\Hy@linktoc\Hy@linktoc@page
2882   \else
2883     \let\Hy@linktoc\Hy@linktoc@section
2884   \fi
2885 }
2886 \chardef\Hy@linktoc@none=0 %
2887 \chardef\Hy@linktoc@section=1 %
2888 \chardef\Hy@linktoc@page=2 %
2889 \chardef\Hy@linktoc@all=3 %
2890 \ifHy@linktocpage
2891   \let\Hy@linktoc\Hy@linktoc@page
2892 \else
2893   \let\Hy@linktoc\Hy@linktoc@section
2894 \fi
2895 \define@key{Hyp}{linktoc}{%
2896   \@ifundefined{Hy@linktoc@#1}{%
2897     \Hy@Warning{%
2898       Unexpected value `#1' of\MessageBreak
2899       option `linktoc' instead of `none',\MessageBreak
2900       `section', `page' or `all'%
2901     }%
2902   }{%
2903     \expandafter\let\expandafter\Hy@linktoc
2904       \csname Hy@linktoc@#1\endcsname
2905   }%
2906 }
2907 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2908 \let\XR@ext\relax
2909 \define@key{Hyp}{verbose}[true]{%
2910   \Hy@boolkey{verbose}{#1}%
2911 }

```

```

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

```

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.

```

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

```

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

```

2918 \def\Hy@setbreaklinks#1{%
2919   \csname breaklinks#1\endcsname
2920 }
2921 \def\Hy@breaklinks@unsupported{%
2922   \ifx\Hy@setbreaklinks@gobble
2923     \ifHy@breaklinks
2924       \Hy@WarningNoLine{%
2925         You have enabled option `breaklinks'.\MessageBreak
2926         But driver `Hy@driver.def' does not support this.\MessageBreak
2927         Expect trouble with the link areas of broken links%
2928       }%
2929     \fi
2930   \fi
2931 }
2932 \define@key{Hyp}{breaklinks}[true]{%
2933   \Hy@boolkey{breaklinks}{#1}%
2934   \let\Hy@setbreaklinks@gobble
2935 }
2936 \define@key{Hyp}{localanchorname}[true]{%
2937   \Hy@boolkey{localanchorname}{#1}%
2938 }

```

Determines whether an automatic anchor is put on each page

```

2939 \define@key{Hyp}{pageanchor}[true]{%
2940   \Hy@boolkey{pageanchor}{#1}%
2941 }

```

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.

```

2942 \define@key{Hyp}{plainpages}[true]{%
2943   \Hy@boolkey{plainpages}{#1}%
2944 }

```

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

```

2945 \define@key{Hyp}{naturalnames}[true]{%
2946   \Hy@boolkey{naturalnames}{#1}%
2947 }

```

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

```

2948 \define@key{Hyp}{hypertexnames}[true]{%
2949   \Hy@boolkey{hypertexnames}{#1}%
2950 }

```

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

```

2951 \define@key{Hyp}{nesting}[true]{%
2952   \Hy@boolkey{nesting}{#1}%
2953 }
2954 \define@key{Hyp}{destlabel}[true]{%
2955   \Hy@boolkey{destlabel}{#1}%
2956 }
2957 \define@key{Hyp}{unicode}[true]{%
2958   \Hy@boolkey{unicode}{#1}%
2959   \ifHy@unicode
2960     \def\HyPsd@pdfencoding{unicode}%
2961     \HyPsd@LoadUnicode
2962   \else
2963     \def\HyPsd@pdfencoding{pdfdoc}%
2964   \fi
2965 }
2966 \Hy@AtBeginDocument{%
2967   \ifx\HyPsd@LoadUnicode\relax
2968   \else
2969     \def\HyPsd@LoadUnicode{%
2970       \Hy@Error{%
2971         Unicode support for bookmarks is not available.\MessageBreak
2972         Activate unicode support by using one of the options\MessageBreak
2973         `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2974         in the preamble%
2975       } \@ehc
2976       \global\let\HyPsd@LoadUnicode\relax
2977       \global\Hy@unicodedefalse
2978       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2979     }%
2980   \fi
2981 }
2982 \define@key{Hyp}{pdfencoding}{%
2983   \edef\HyPsd@temp{#1}%
2984   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2985     \let\HyPsd@pdfencoding\HyPsd@temp
2986     \Hy@unicodedefalse
2987   \else
2988     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2989       \z@
2990     \else
2991       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2992         \z@
2993       \else
2994         \@ne
2995       \fi
2996     \fi
2997     \let\HyPsd@pdfencoding\HyPsd@temp
2998     \hypersetup{unicode}%
2999     \ifHy@unicode
3000       \def\HyPsd@pdfencoding{#1}%
3001       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3002         \HyPsd@LoadStringEncoding
3003       \fi
3004     \else
3005       \Hy@Warning{Cannot switch to unicode bookmarks}%
3006       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3007     \fi

```



```

3008 \else
3009 \onelevel@sanitize\HyPsd@temp
3010 \Hy@Warning{%
3011   Values of option `pdfencoding':\MessageBreak
3012   `pdfdoc', `unicode', `auto'.\MessageBreak
3013   Ignoring unknown value `\'HyPsd@temp'%
3014 }%
3015 \fi
3016 \fi
3017 }
3018 \def\HyPsd@pdfencoding@auto{auto}
3019 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3020 \def\HyPsd@pdfencoding@unicode{unicode}
3021 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3022 \def\HyPsd@LoadStringEnc{%
3023   \RequirePackage{stringenc}[2009/12/15]%
3024   \let\HyPsd@LoadStringEnc\relax
3025 }
3026 \Hy@AtBeginDocument{%
3027   \@ifpackageloaded{stringenc}{%
3028     \let\HyPsd@LoadStringEnc\relax
3029   }{%
3030     \def\HyPsd@LoadStringEnc{%
3031       \Hy@WarningNoLine{%
3032         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3033         in the preamble or load the package there%
3034       }%
3035     }%
3036   }%
3037 }
3038 \define@key{Hyp}{psdextra}[true]{%
3039   \Hy@boolkey{psdextra}{#1}%
3040   \HyPsd@LoadExtra
3041 }
3042 \def\hypersetup{\kvsetkeys{Hyp}}
3043 \newif\ifHy@setpdfversion
3044 \define@key{Hyp}{pdfversion}{%
3045   \@ifundefined{Hy@pdfversion@#1}{%
3046     \PackageWarning{hyperref}{%
3047       Unsupported PDF version `#1'.\MessageBreak
3048       Valid values: 1.2 until 1.9%
3049     }%
3050   }{%
3051     \Hy@setpdfversiontrue
3052     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3053   }%
3054 }
3055 \@namedef{Hy@pdfversion@1.2}{2}%
3056 \@namedef{Hy@pdfversion@1.3}{3}%
3057 \@namedef{Hy@pdfversion@1.4}{4}%
3058 \@namedef{Hy@pdfversion@1.5}{5}%
3059 \@namedef{Hy@pdfversion@1.6}{6}%
3060 \@namedef{Hy@pdfversion@1.7}{7}%
3061 \@namedef{Hy@pdfversion@1.8}{8}%
3062 \@namedef{Hy@pdfversion@1.9}{9}%
3063 \def\Hy@pdfversion{5}

```

10 Options for different drivers

```

3064 \newif\ifHy@DviMode
3065 \let\Hy@DviErrMsg\ltx@empty
3066 \ifpdf
3067   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3068 \else
3069   \ifxetex
3070     \def\Hy@DviErrMsg{XeTeX is running}%
3071   \else
3072     \ifvtex
3073       \ifvtexdvi
3074         \Hy@DviModetrue
3075       \else
3076         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3077       \fi
3078     \else
3079       \Hy@DviModetrue
3080     \fi
3081   \fi
3082 \fi
3083 \def\HyOpt@CheckDvi#1{%
3084   \ifHy@DviMode
3085     \expandafter\ltx@firstofone
3086   \else
3087     \Hy@Error{%
3088       Wrong DVI mode driver option `#1',\MessageBreak
3089       because \Hy@DviErrMsg
3090     }\@ehc
3091     \expandafter\ltx@gobble
3092   \fi
3093 }

3094 \DeclareVoidOption{tex4ht}{%
3095   \Hy@texhttrue
3096   \kvsetkeys{Hyp}{colorlinks=true}%
3097   \def\BeforeTeXIVht{\RequirePackage{color}}}%
3098 \def\Hy@driver{htex4ht}%
3099 \def\MaybeStopEarly{%
3100   \Hy@Message{Stopped early}%
3101   \Hy@AtBeginDocument{%
3102     \PDF@FinishDoc
3103     \gdef\PDF@FinishDoc{}%
3104   }%
3105   \endinput
3106 }%
3107 }

3108 \DeclareVoidOption{pdftex}{%
3109   \ifpdf
3110     \def\Hy@driver{hpdftex}%
3111     \PassOptionsToPackage{pdftex}{color}%
3112   \else
3113     \Hy@Error{%
3114       Wrong driver option `pdftex',\MessageBreak
3115       because pdfTeX in PDF mode is not detected%
3116     }\@ehc
3117   \fi
3118 }

```

```

3119 \DeclareVoidOption{luatex}{%
3120   \ifpdf
3121     \ifx\pdfextension\@undefined
3122       \def\Hy@driver{hpdfTeX}%
3123       \PassOptionsToPackage{pdfTeX}{color}%
3124     \else
3125       \def\Hy@driver{hluatex}%
3126       \PassOptionsToPackage{luatex}{color}%
3127     \fi
3128   \else
3129     \Hy@Error{%
3130       Wrong driver option `luatex',\MessageBreak
3131       because luaTeX in PDF mode is not detected%
3132     }\@ehc
3133   \fi
3134 }
3135 \DeclareVoidOption{nativepdf}{%
3136   \HyOpt@CheckDvi{nativepdf}{%
3137     \def\Hy@driver{hdvips}%
3138     \PassOptionsToPackage{dvips}{color}%
3139   }%
3140 }
3141 \DeclareVoidOption{dvipdfm}{%
3142   \HyOpt@CheckDvi{dvipdfm}{%
3143     \def\Hy@driver{hdvipdfm}%
3144   }%
3145 }
3146 \DeclareVoidOption{dvipdfmx}{%
3147   \HyOpt@CheckDvi{dvipdfmx}{%
3148     \def\Hy@driver{hdvipdfm}%
3149     \PassOptionsToPackage{dvipdfmx}{color}%
3150   }%
3151 }
3152 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3153   \expandafter\ifx\csname if#1\expandafter\endcsname
3154     \csname iftrue\endcsname
3155     \chardef\SpecialDvipdfmxOutlineOpen\@ne
3156   \else
3157     \chardef\SpecialDvipdfmxOutlineOpen\z@
3158   \fi
3159 }
3160 \DeclareVoidOption{xetex}{%
3161   \ifxetex
3162     \def\Hy@driver{hxetex}%
3163   \else
3164     \Hy@Error{%
3165       Wrong driver option `xetex',\MessageBreak
3166       because XeTeX is not detected%
3167     }\@ehc
3168   \fi
3169 }
3170 \DeclareVoidOption{pdfmark}{%
3171   \HyOpt@CheckDvi{pdfmark}{%
3172     \def\Hy@driver{hdvips}%
3173   }%
3174 }
3175 \DeclareVoidOption{dvips}{%

```

```

3176 \HyOpt@CheckDvi{dvips}{%
3177   \def\Hy@driver{hdvips}%
3178   \PassOptionsToPackage{dvips}{color}%
3179 }%
3180 }
3181 \DeclareVoidOption{hypertex}{%
3182   \HyOpt@CheckDvi{hypertex}{%
3183     \def\Hy@driver{hypertex}%
3184   }%
3185 }
3186 \let\Hy@MaybeStopNow\relax
3187 \DeclareVoidOption{vtex}{%
3188   \ifvtex
3189     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3190     \def\Hy@driver{hvtex}%
3191   \else
3192     \ifnum\OpMode=10\relax
3193     \def\Hy@driver{hvtexhtm}%
3194     \def\MaybeStopEarly{%
3195       \Hy@Message{Stopped early}%
3196       \Hy@AtBeginDocument{%
3197         \PDF@FinishDoc
3198         \gdef\PDF@FinishDoc{}%
3199       }%
3200     \endinput
3201   }%
3202   \else
3203     \Hy@Error{%
3204       Wrong driver option `vtex',\MessageBreak
3205       because of wrong OpMode (\the\OpMode)%
3206     }\@ehc
3207   \fi
3208   \fi
3209   \else
3210     \Hy@Error{%
3211       Wrong driver option `vtex',\MessageBreak
3212       because VTeX is not running%
3213     }\@ehc
3214   \fi
3215 }
3216 \DeclareVoidOption{vtexpdfmark}{%
3217   \ifvtex
3218     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3219     \def\Hy@driver{hvtexmrk}%
3220   \else
3221     \Hy@Error{%
3222       Wrong driver option `vtexpdfmark',\MessageBreak
3223       because of wrong OpMode (\the\OpMode)%
3224     }\@ehc
3225   \fi
3226   \else
3227     \Hy@Error{%
3228       Wrong driver option `vtexpdfmark,\MessageBreak
3229       because VTeX is not running%
3230     }\@ehc
3231   \fi
3232 }

```

```

3233 \DeclareVoidOption{dviwindo}{%
3234   \HyOpt@CheckDvi{dviwindo}{%
3235     \def\Hy@driver{hdviwind}%
3236     \kvsetkeys{Hyp}{colorlinks}%
3237     \PassOptionsToPackage{dviwindo}{color}%
3238   }%
3239 }
3240 \DeclareVoidOption{dvipsone}{%
3241   \HyOpt@CheckDvi{dvipsone}{%
3242     \def\Hy@driver{hdvipson}%
3243     \PassOptionsToPackage{dvipsone}{color}%
3244   }%
3245 }
3246 \DeclareVoidOption{textures}{%
3247   \HyOpt@CheckDvi{textures}{%
3248     \def\Hy@driver{htexture}%
3249   }%
3250 }
3251 \DeclareVoidOption{latex2html}{%
3252   \HyOpt@CheckDvi{latex2html}{%
3253     \Hy@AtBeginDocument{\@@latextohtmlX}%
3254   }%
3255 }

```

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

```

3256 \DeclareVoidOption{ps2pdf}{%
3257   \HyOpt@CheckDvi{ps2pdf}{%
3258     \def\Hy@driver{hdvips}%
3259     \PassOptionsToPackage{dvips}{color}%
3260   }%
3261 }
3262 \let\HyOpt@DriverFallback\ltx@empty
3263 \define@key{Hyp}{driverfallback}{%
3264   \ifHy@DviMode
3265     \def\HyOpt@DriverFallback{#1}%
3266     \Hy@Match\HyOpt@DriverFallback{}{%
3267       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3268       latex2html|tex4ht)$%
3269     }{}{%
3270       \Hy@Warning{%
3271         Invalid driver `#1' for option\MessageBreak
3272         `driverfallback'%
3273       }%
3274       \let\HyOpt@DriverFallback\ltx@empty
3275     }%
3276   \fi
3277 }
3278 \let\HyOpt@CustomDriver\ltx@empty
3279 \define@key{Hyp}{customdriver}{%
3280   \IfFileExists{#1.def}{%
3281     \def\HyOpt@CustomDriver{#1}%
3282   }{%
3283     \Hy@Warning{%
3284       Missing driver file `#1.def',\MessageBreak
3285       ignoring custom driver%
3286     }%
3287   }%

```

3288 }

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.

```
3289 \define@key{Hyp}{hyperfigures}[true]{%
3290   \Hy@boolkey{hyperfigures}{#1}%
3291 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
3292 \define@key{Hyp}{hyperfootnotes}[true]{%
3293   \Hy@boolkey{hyperfootnotes}{#1}%
3294 }
```

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

```
3295 \def\back@none{none}
3296 \def\back@section{section}
3297 \def\back@page{page}
3298 \def\back@slide{slide}
3299 \define@key{Hyp}{backref}[section]{%
3300   \lowercase{\def\Hy@tempa{#1}}%
3301   \ifx\Hy@tempa\@empty
3302     \let\Hy@tempa\back@section
3303   \fi
3304   \ifx\Hy@tempa\Hy@false
3305     \let\Hy@tempa\back@none
3306   \fi
3307   \ifx\Hy@tempa\back@slide
3308     \let\Hy@tempa\back@section
3309   \fi
3310   \ifx\Hy@tempa\back@page
3311     \PassOptionsToPackage{hyperpageref}{backref}%
3312     \Hy@backreftrue
3313   \else
3314     \ifx\Hy@tempa\back@section
3315       \PassOptionsToPackage{hyperref}{backref}%
3316       \Hy@backreftrue
3317     \else
3318       \ifx\Hy@tempa\back@none
3319         \Hy@backreffalse
3320       \else
3321         \Hy@WarnOptionValue{#1}{backref}{%
3322           `section', `slide', `page', `none',\MessageBreak
3323           or `false'}%
3324       \fi
3325     \fi
3326   \fi
3327 }
3328 \define@key{Hyp}{pagebackref}[true]{%
3329   \edef\Hy@tempa{#1}%
3330   \lowercase\expandafter{%
3331     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3332   }%
3333   \ifx\Hy@tempa\@empty
3334     \let\Hy@tempa\Hy@true
3335   \fi
3336   \ifx\Hy@tempa\Hy@true
```

```

3337 \PassOptionsToPackage{hyperpageref}{backref}%
3338 \Hy@backreftrue
3339 \else
3340 \ifx\Hy@tempa\Hy@false
3341 \Hy@backreffalse
3342 \else
3343 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3344 \fi
3345 \fi
3346 }

```

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

```

3347 \define@key{Hyp}{hyperindex}[true]{%
3348 \Hy@boolkey{hyperindex}{#1}%
3349 }

```

Configuration of encap char.

```

3350 \define@key{Hyp}{encap}[|]{%
3351 \def\HyInd@EncapChar{#1}%
3352 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3353 \def\HyLang@afrikaans{%
3354 \def\equationautorefname{Vergelyking}%
3355 \def\footnoteautorefname{Voetnota}%
3356 \def\itemautorefname{Item}%
3357 \def\figureautorefname{Figuur}%
3358 \def\tableautorefname{Tabel}%
3359 \def\partautorefname{Deel}%
3360 \def\appendixautorefname{Bylae}%
3361 \def\chapterautorefname{Hoofstuk}%
3362 \def\sectionautorefname{Afdeling}%
3363 \def\subsectionautorefname{Subafdeling}%
3364 \def\subsubsectionautorefname{Subsubafdeling}%
3365 \def\paragraphautorefname{Paragraaf}%
3366 \def\subparagraphautorefname{Subparagraaf}%
3367 \def\FancyVerbLineautorefname{Lyn}%
3368 \def\theoremautorefname{Teorema}%
3369 \def\pageautorefname{Bladsy}%
3370 }
3371 \def\HyLang@english{%
3372 \def\equationautorefname{Equation}%
3373 \def\footnoteautorefname{footnote}%
3374 \def\itemautorefname{item}%
3375 \def\figureautorefname{Figure}%
3376 \def\tableautorefname{Table}%
3377 \def\partautorefname{Part}%
3378 \def\appendixautorefname{Appendix}%
3379 \def\chapterautorefname{chapter}%
3380 \def\sectionautorefname{section}%
3381 \def\subsectionautorefname{subsection}%
3382 \def\subsubsectionautorefname{subsubsection}%
3383 \def\paragraphautorefname{paragraph}%
3384 \def\subparagraphautorefname{subparagraph}%

```

```

3385 \def\FancyVerbLineautorefname{line}%
3386 \def\theoremautorefname{Theorem}%
3387 \def\pageautorefname{page}%
3388 }
3389 \def\HyLang@french{%
3390 \def\equationautorefname{'Equation}%
3391 \def\footnoteautorefname{note}%
3392 \def\itemautorefname{item}%
3393 \def\figureautorefname{Figure}%
3394 \def\tableautorefname{Tableau}%
3395 \def\partautorefname{Partie}%
3396 \def\appendixautorefname{Appendice}%
3397 \def\chapterautorefname{chapitre}%
3398 \def\sectionautorefname{section}%
3399 \def\subsectionautorefname{sous-section}%
3400 \def\subsubsectionautorefname{sous-sous-section}%
3401 \def\paragraphautorefname{paragraphe}%
3402 \def\subparagraphautorefname{sous-paragraphe}%
3403 \def\FancyVerbLineautorefname{ligne}%
3404 \def\theoremautorefname{Th\'eor\`eme}%
3405 \def\pageautorefname{page}%
3406 }
3407 \def\HyLang@german{%
3408 \def\equationautorefname{Gleichung}%
3409 \def\footnoteautorefname{Fu\ss note}%
3410 \def\itemautorefname{Punkt}%
3411 \def\figureautorefname{Abbildung}%
3412 \def\tableautorefname{Tabelle}%
3413 \def\partautorefname{Teil}%
3414 \def\appendixautorefname{Anhang}%
3415 \def\chapterautorefname{Kapitel}%
3416 \def\sectionautorefname{Abschnitt}%
3417 \def\subsectionautorefname{Unterabschnitt}%
3418 \def\subsubsectionautorefname{Unterunterabschnitt}%
3419 \def\paragraphautorefname{Absatz}%
3420 \def\subparagraphautorefname{Unterabsatz}%
3421 \def\FancyVerbLineautorefname{Zeile}%
3422 \def\theoremautorefname{Theorem}%
3423 \def\pageautorefname{Seite}%
3424 }
3425 \def\HyLang@italian{%
3426 \def\equationautorefname{Equazione}%
3427 \def\footnoteautorefname{nota}%
3428 \def\itemautorefname{punto}%
3429 \def\figureautorefname{Figura}%
3430 \def\tableautorefname{Tabella}%
3431 \def\partautorefname{Parte}%
3432 \def\appendixautorefname{Appendice}%
3433 \def\chapterautorefname{Capitolo}%
3434 \def\sectionautorefname{sezione}%
3435 \def\subsectionautorefname{sottosezione}%
3436 \def\subsubsectionautorefname{sottosottosezione}%
3437 \def\paragraphautorefname{paragrafo}%
3438 \def\subparagraphautorefname{sottoparagrafo}%
3439 \def\FancyVerbLineautorefname{linea}%
3440 \def\theoremautorefname{Teorema}%
3441 \def\pageautorefname{Pag.\@}%

```



```

3442 }
3443 \def\HyLang@magyar{%
3444 \def\equationautorefname{Egyenlet}%
3445 \def\footnoteautorefname{l\'abjegyzet}%
3446 \def\itemautorefname{Elem}%
3447 \def\figureautorefname{\'Abra}%
3448 \def\tableautorefname{T\'abl\'azat}%
3449 \def\partautorefname{R\'esz}%
3450 \def\appendixautorefname{F\'uggel\'ek}%
3451 \def\chapterautorefname{fejezet}%
3452 \def\sectionautorefname{szakasz}%
3453 \def\subsectionautorefname{alszakasz}%
3454 \def\subsubsectionautorefname{alalszakasz}%
3455 \def\paragraphautorefname{bekezd\'es}%
3456 \def\subparagraphautorefname{albekezd\'es}%
3457 \def\FancyVerbLineautorefname{sor}%
3458 \def\theoremautorefname{T\'etel}%
3459 \def\pageautorefname{oldal}%
3460 }
3461 \def\HyLang@portuges{%
3462 \def\equationautorefname{Equa\c c\~ao}%
3463 \def\footnoteautorefname{Nota de rodap\'e}%
3464 \def\itemautorefname{Item}%
3465 \def\figureautorefname{Figura}%
3466 \def\tableautorefname{Tabela}%
3467 \def\partautorefname{Parte}%
3468 \def\appendixautorefname{Ap\~endice}%
3469 \def\chapterautorefname{Cap\'itulo}%
3470 \def\sectionautorefname{Se\c c\~ao}%
3471 \def\subsectionautorefname{Subse\c c\~ao}%
3472 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3473 \def\paragraphautorefname{par\'agrafo}%
3474 \def\subparagraphautorefname{subpar\'agrafo}%
3475 \def\FancyVerbLineautorefname{linha}%
3476 \def\theoremautorefname{Teorema}%
3477 \def\pageautorefname{P\'agina}%
3478 }

```

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`.

```

3479 \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`?

```

3480 \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{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```

3481 % \def\equationautorefname{%
3482 % \cyr\cyrv\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3483 % }%

```

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

```
3484 \def\footnoteautorefname{%
3485   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3486 }%
```

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}”

```
3487 % \def\footnoteautorefname{%
3488 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3489 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3490 % }%
```

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

```
3491 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3492 % \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.

```
3493 \def\itemautorefname{\cyr\cyrp.}%
3494 % \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.

```
3495 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3496 \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.

```
3497 \def\partautorefname{\cyr\cyrch.}%
3498 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3499 \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.

```
3500 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3501 % \def\appendixautorefname{%
3502 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3503 % }%
```

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.

```
3504 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3505 \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.

```
3506 \def\paragraphautorefname{\cyr\cyrp.}%
3507 \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.

```
3508 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3509 % \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.

```
3510 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3511 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3512 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3513 % \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 ...

```
3514 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3515 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3516 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3517 \def\pageautorefname{\cyr\cyrs.}%
3518 }
```

```
3519 \def\HyLang@spanish{%
3520 \def\equationautorefname{Ecuaci\`on}%
3521 \def\footnoteautorefname{Nota a pie de p\`agina}%
3522 \def\itemautorefname{Elemento}%
3523 \def\figureautorefname{Figura}%
3524 \def\tableautorefname{Tabla}%
3525 \def\partautorefname{Parte}%
3526 \def\appendixautorefname{Ap\`endice}%
3527 \def\chapterautorefname{Cap\`itulo}%
3528 \def\sectionautorefname{Secci\`on}%
3529 \def\subsectionautorefname{Subsecci\`on}%
3530 \def\subsubsectionautorefname{Subsubsecci\`on}%
3531 \def\paragraphautorefname{P\`arrafo}%
3532 \def\subparagraphautorefname{Subp\`arrafo}%
3533 \def\FancyVerbLineautorefname{L\`inea}%
3534 \def\theoremautorefname{Teorema}%
3535 \def\pageautorefname{P\`agina}%
3536 }
```

```
3537 \def\HyLang@catalan{%
3538 \def\equationautorefname{Equaci\`o}%
3539 \def\footnoteautorefname{Nota al peu de p\`agina}%
3540 \def\itemautorefname{Element}%
3541 \def\figureautorefname{Figura}%
3542 \def\tableautorefname{Taula}%
3543 \def\partautorefname{Part}%
```

```

3544 \def\appendixautorefname{Ap\`endix}%
3545 \def\chapterautorefname{Cap\`itol}%
3546 \def\sectionautorefname{Secci\`o}%
3547 \def\subsectionautorefname{Subsecci\`o}%
3548 \def\subsubsectionautorefname{Subsubsecci\`o}%
3549 \def\paragraphautorefname{Par\`agraf}%
3550 \def\subparagraphautorefname{Subpar\`agraf}%
3551 \def\FancyVerbLineautorefname{L\`inia}%
3552 \def\theoremautorefname{Teorema}%
3553 \def\pageautorefname{P\`agina}%
3554 }

3555 \def\HyLang@vietnamese{%
3556   \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3557   \def\footnoteautorefname{Ch\`u th\`ich}%
3558   \def\itemautorefname{m\`d{u}c}%
3559   \def\figureautorefname{H\`inh}%
3560   \def\tableautorefname{B\`h{a}ng}%
3561   \def\partautorefname{Ph\`acircumflex{}n}%
3562   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3563   \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3564   \def\sectionautorefname{m\`d{u}c}%
3565   \def\subsectionautorefname{m\`d{u}c}%
3566   \def\subsubsectionautorefname{m\`d{u}c}%
3567   \def\paragraphautorefname{\dj{}o\`d{a}n}%
3568   \def\subparagraphautorefname{\dj{}o\`d{a}n}%
3569   \def\FancyVerbLineautorefname{d\`ong}%
3570   \def\theoremautorefname{DJ{}\`d{i}nh l\`y}%
3571   \def\pageautorefname{Trang}%
3572 }

```

Greek, see github issue 52

```

3573 \def\HyLang@greek{%
3574   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\text-
3575     tomega\textsigma\texteta}%
3576   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\text-
3577     eta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3578   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textep-
3579     silon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3580   \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textal-
3581     pha}%
3582   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\text-
3583     alpha}%
3584   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
3585     sigma}%
3586   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
3587     rho\texttau\texteta\textmu\textalpha}%
3588   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
3589     pha\textlambda\textalpha\textiota\textomicron}%
3590   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
3591     eta\texttau\textalpha}%
3592   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
3593     conos\textomicron\texttau\texteta\texttau\textalpha}%
3594   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\text-
3595     eta\textalpha\textphi\textomicron\textvarsigma}%
3596   \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\text-
3597     rho\textalpha\textphi\textomicron\textvarsigma}%
3598   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\text-
3599     alpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
3600     cron\textvarsigma}%

```

```

3587 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
      ctonos\texteta}%
3588 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\text-
      rho\texteta\textmu\textalpha}%
3589 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\text-
      alpha}%
3590 }

3591 \def\HyLang@dutch{%
3592   \def\equationautorefname{Vergelijking}%
3593   \def\footnoteautorefname{voetnoot}%
3594   \def\itemautorefname{punt}%
3595   \def\figureautorefname{Figuur}%
3596   \def\tableautorefname{Tabel}%
3597   \def\partautorefname{Deel}%
3598   \def\appendixautorefname{Bijlage}%
3599   \def\chapterautorefname{hoofdstuk}%
3600   \def\sectionautorefname{paragraaf}%
3601   \def\subsectionautorefname{deelparagraaf}%
3602   \def\subsubsectionautorefname{deel-deelparagraaf}%
3603   \def\paragraphautorefname{alinea}%
3604   \def\subparagraphautorefname{deelalinea}%
3605   \def\FancyVerbLineautorefname{regel}%
3606   \def\theoremautorefname{Stelling}%
3607   \def\pageautorefname{pagina}%
3608 }

```

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

```

3609 \def\HyLang@addto#1#2{%
3610   #2%
3611   \@temptokena{#2}%
3612   \ifx#1\relax
3613     \let#1\@empty
3614   \fi
3615   \ifx#1\@undefined
3616     \edef#1{\the\@temptokena}%
3617   \else
3618     \toks@\expandafter{#1}%
3619     \edef#1{\the\toks@\the\@temptokena}%
3620   \fi
3621   \@temptokena{}\toks@\@temptokena
3622 }

3623 \def\HyLang@DeclareLang#1#2#3{%
3624   \@ifpackagewith{babel}{#1}{%
3625     \expandafter\HyLang@addto
3626       \csname extras#1\expandafter\endcsname
3627       \csname HyLang@#2\endcsname
3628     \begingroup
3629     \edef\x{\endgroup
3630       #3%
3631     }%
3632     \x
3633     \@namedef{HyLang@#1@done}{}%
3634   }{}%
3635   \begingroup
3636   \edef\x##1##2{%
3637     \noexpand\ifx##2\relax

```

```

3638 \errmessage{No definitions for language #2' found!}%
3639 \noexpand\fi
3640 \endgroup
3641 \noexpand\define@key{Hyp}{#1}[]{}%
3642 \noexpand\@ifundefined{HyLang@#1@done}{}%
3643 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3644 #3%
3645 \noexpand\@namedef{HyLang@#1@done}{}%
3646 }{}%
3647 }%
3648 }%
3649 \expandafter\x\csname extras#1\expandafter\endcsname
3650 \csname HyLang@#2\endcsname
3651 }
3652 \HyLang@DeclareLang{english}{english}{}
3653 \HyLang@DeclareLang{UKenglish}{english}{}
3654 \HyLang@DeclareLang{british}{english}{}
3655 \HyLang@DeclareLang{USenglish}{english}{}
3656 \HyLang@DeclareLang{american}{english}{}
3657 \HyLang@DeclareLang{german}{german}{}
3658 \HyLang@DeclareLang{austrian}{german}{}
3659 \HyLang@DeclareLang{ngerman}{german}{}
3660 \HyLang@DeclareLang{naustrian}{german}{}
3661 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3662 \HyLang@DeclareLang{brazil}{portuges}{}
3663 \HyLang@DeclareLang{brazilian}{portuges}{}
3664 \HyLang@DeclareLang{portuguese}{portuges}{}
3665 \HyLang@DeclareLang{spanish}{spanish}{}
3666 \HyLang@DeclareLang{catalan}{catalan}{}
3667 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3668 \HyLang@DeclareLang{french}{french}{}
3669 \HyLang@DeclareLang{frenchb}{french}{}
3670 \HyLang@DeclareLang{français}{french}{}
3671 \HyLang@DeclareLang{acadian}{french}{}
3672 \HyLang@DeclareLang{canadien}{french}{}
3673 \HyLang@DeclareLang{italian}{italian}{}
3674 \HyLang@DeclareLang{magyar}{magyar}{}
3675 \HyLang@DeclareLang{hungarian}{magyar}{}
3676 \HyLang@DeclareLang{greek}{greek}{}
3677 \HyLang@DeclareLang{dutch}{dutch}{}

```

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

```

3678 \DeclareVoidOption{vietnamese}{}%
3679 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3680 \Hy@AtEndOfPackage{%
3681 \@ifundefined{T@PU}{}{}%
3682 \input{pvnenc.def}%
3683 }%
3684 }%
3685 }
3686 \DeclareVoidOption{vietnam}{}%
3687 \HyLang@addto\extravietnam\HyLang@vietnamese
3688 \Hy@AtEndOfPackage{%
3689 \@ifundefined{T@PU}{}{}%
3690 \input{pvnenc.def}%
3691 }%
3692 }%
3693 }

```

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

```

3694 \DeclareVoidOption{arabic}{%
3695   \Hy@AtEndOfPackage{%
3696     \@ifundefined{T@PU}{}{%
3697       \input{puarenc.def}%
3698     }%
3699   }%
3700 }
```

13 Options to change appearance of links

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

```

3701 \define@key{Hyp}{colorlinks}[true]{%
3702   \Hy@boolkey{colorlinks}{#1}%
3703 }
3704 \DeclareVoidOption{hidelinks}{%
3705   \Hy@colorlinksfalse
3706   \Hy@ocgcolorlinksfalse
3707   \Hy@frenchlinksfalse
3708   \def\Hy@colorlink##1{\begingroup}%
3709   \def\Hy@endcolorlink{\endgroup}%
3710   \def\@pdfborder{0 0 0}%
3711   \let\@pdfborderstyle\tx@empty
3712 }
3713 \define@key{Hyp}{ocgcolorlinks}[true]{%
3714   \Hy@boolkey{ocgcolorlinks}{#1}%
3715 }
3716 \Hy@AtBeginDocument{%
3717   \begingroup
3718   \@ifundefined{OBJ@OCG@view}{%
3719     \ifHy@ocgcolorlinks
3720       \Hy@Warning{%
3721         Driver does not support `ocgcolorlinks',\MessageBreak
3722         using `colorlinks' instead%
3723       }%
3724     \fi
3725   }{}%
3726   \endgroup
3727 }
3728 \define@key{Hyp}{frenchlinks}[true]{%
3729   \Hy@boolkey{frenchlinks}{#1}%
3730 }
```

14 Bookmarking

```

3731 \begingroup\expandafter\expandafter\expandafter\endgroup
3732 \expandafter\ifx\csname chapter\endcsname\relax
3733   \def\toclevel@part{0}%
3734 \else
3735   \def\toclevel@part{-1}%
3736 \fi
3737 \def\toclevel@chapter{0}
3738 \def\toclevel@section{1}
3739 \def\toclevel@subsection{2}
3740 \def\toclevel@subsubsection{3}
```

```

3741 \def\toclevel@paragraph{4}
3742 \def\toclevel@subparagraph{5}
3743 \def\toclevel@figure{0}
3744 \def\toclevel@table{0}
3745 \@ifpackageloaded{listings}{%
3746   \providecommand*\theHlstlisting{\thelstlisting}%
3747   \providecommand*\toclevel@lstlisting{0}%
3748 }{}
3749 \@ifpackageloaded{listing}{%
3750   \providecommand*\theHlisting{\thelisting}%
3751   \providecommand*\toclevel@listing{0}%
3752 }{}

3753 \define@key{Hyp}{bookmarks}[true]{%
3754   \Hy@boolkey{bookmarks}{#1}%
3755 }

3756 \define@key{Hyp}{bookmarksopen}[true]{%
3757   \Hy@boolkey{bookmarksopen}{#1}%
3758 }

```

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.

```

3759 \let\Hy@bookmarksdepth\c@tocdepth
3760 \define@key{Hyp}{bookmarksdepth}[]{%
3761   \begingroup
3762     \edef\x{#1}%
3763     \ifx\x\empty
3764       \global\let\Hy@bookmarksdepth\c@tocdepth
3765     \else
3766       \@ifundefined{toclevel@\x}{%
3767         \@onelevel@sanitize\x
3768         \edef\y{\expandafter\@car\x\@nil}%
3769         \ifcase 0\expandafter\ifx\y-1\fi
3770           \expandafter\ifnum\expandafter`\y>47 %
3771             \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3772           \Hy@Warning{Unknown document division name (\x)}%
3773         \else
3774           \setbox\z@=\hbox{%
3775             \count@=\x
3776             \xdef\Hy@bookmarksdepth{\the\count@}%
3777           }%
3778         \fi
3779       }{%
3780         \setbox\z@=\hbox{%
3781           \count@=\csname toclevel@\x\endcsname
3782           \xdef\Hy@bookmarksdepth{\the\count@}%
3783         }%
3784       }%
3785     \fi

```



```

3786 \endgroup
3787 }

```

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

```

3788 \define@key{Hyp}{bookmarksopenlevel}{%
3789 \def\@bookmarksopenlevel{#1}%
3790 }
3791 \def\@bookmarksopenlevel{\maxdimen}
3792 % `bookmarkstype' to specify which `toc' file to mimic
3793 \define@key{Hyp}{bookmarkstype}{%
3794 \def\Hy@bookmarkstype{#1}%
3795 }
3796 \def\Hy@bookmarkstype{toc}

```

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

```

3797 \define@key{Hyp}{bookmarksnumbered}[true]{%
3798 \Hy@boolkey{bookmarksnumbered}{#1}%
3799 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3800 \define@key{Hyp}{CJKbookmarks}[true]{%
3801 \Hy@boolkey{CJKbookmarks}{#1}%
3802 }

3803 \def\Hy@temp#1{%
3804 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3805 }
3806 \def\Hy@@temp#1#2#3{%
3807 \define@key{Hyp}{#2color}{%
3808 \HyColor@HyperrefColor{##1}#1%
3809 }%
3810 \def#1{#3}%
3811 }
3812 \Hy@temp{link}{red}
3813 \Hy@temp{anchor}{black}
3814 \Hy@temp{cite}{green}
3815 \Hy@temp{file}{cyan}
3816 \Hy@temp{url}{magenta}
3817 \Hy@temp{menu}{red}
3818 \Hy@temp{run}{\@filecolor}
3819 \define@key{Hyp}{pagecolor}{%
3820 \Hy@WarningPageColor
3821 }
3822 \def\Hy@WarningPageColor{%
3823 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3824 \global\let\Hy@WarningPageColor\relax
3825 }
3826 \define@key{Hyp}{allcolors}{%
3827 \HyColor@HyperrefColor{#1}\@linkcolor
3828 \HyColor@HyperrefColor{#1}\@anchorcolor
3829 \HyColor@HyperrefColor{#1}\@citecolor
3830 \HyColor@HyperrefColor{#1}\@filecolor
3831 \HyColor@HyperrefColor{#1}\@urlcolor
3832 \HyColor@HyperrefColor{#1}\@menucolor
3833 \HyColor@HyperrefColor{#1}\@runcolor
3834 }

3835 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3836 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}

```

```

3837 \let\@baseurl\@empty
3838 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3839 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3840 \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.

```

3841 \let\@pdfpagetransition\relax
3842 \define@key{Hyp}{pdfpagetransition}{%
3843   \def\@pdfpagetransition{#1}%
3844 }

```

`\@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.

```

3845 \let\@pdfpageduration\relax
3846 \define@key{Hyp}{pdfpageduration}{%
3847   \def\@pdfpageduration{#1}%
3848   \Hy@Match\@pdfpageduration{}{
3849     ~(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3850   }{}{
3851     \Hy@Warning{
3852       Invalid value `'\@pdfpageduration'\MessageBreak
3853       of option `pdfpageduration'\MessageBreak
3854       is replaced by an empty value%
3855     }%
3856     \let\@pdfpageduration\ltx@empty
3857   }%
3858 }

```

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.

```

3859 \newif\ifHy@useHidKey
3860 \Hy@useHidKeyfalse
3861 \define@key{Hyp}{pdfpagehidden}[true]{%
3862   \Hy@boolkey{pdfpagehidden}{#1}%
3863   \ifHy@pdfpagehidden
3864     \global\Hy@useHidKeytrue
3865   \fi
3866 }

```

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).

```

3867 \def\Hy@ColorList{cite,file,link,menu,run,url}
3868 \@for\Hy@temp:=\Hy@ColorList\do{%

```

```

3869 \edef\Hy@temp{%
3870   \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3871     \noexpand\HyColor@HyperrefBorderColor
3872     {##1}%
3873     \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3874     {hyperref}%
3875     {\Hy@temp bordercolor}%
3876   }%
3877 }%
3878 \Hy@temp
3879 }
3880 \define@key{Hyp}{pagebordercolor}{%
3881   \Hy@WarningPageBorderColor
3882 }
3883 \def\Hy@WarningPageBorderColor{%
3884   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3885   \global\let\Hy@WarningPageBorderColor\relax
3886 }
3887 \define@key{Hyp}{allbordercolors}{%
3888   \def\Hy@temp##1##2{%
3889     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3890   }%
3891   \Hy@temp\@citebordercolor{cite}%
3892   \Hy@temp\@filebordercolor{file}%
3893   \Hy@temp\@linkbordercolor{link}%
3894   \Hy@temp\@menubordercolor{menu}%
3895   \Hy@temp\@runbordercolor{run}%
3896   \Hy@temp\@urlbordercolor{url}%
3897 }
3898 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3899 \Hy@DefNameKey{pdfhighlight}{%
3900   \do{/I}{Invert}%
3901   \do{/N}{None}%
3902   \do{/O}{Outline}%
3903   \do{/P}{Push}%
3904 }
3905 \def\Hy@setpdfhighlight{%
3906   \ifx\@pdfhighlight\@empty
3907   \else
3908     /H\@pdfhighlight
3909   \fi
3910 }
3911 \define@key{Hyp}{pdfborder}{%
3912   \let\Hy@temp\@pdfborder
3913   \def\@pdfborder{#1}%
3914   \Hy@Match\@pdfborder{}{%
3915     ^\HyPat@NonNegativeReal/ %
3916     \HyPat@NonNegativeReal/ %
3917     \HyPat@NonNegativeReal/%
3918     ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%$%
3919   }{}{%
3920     \Hy@Warning{%
3921       Invalid value ``\@pdfborder'\MessageBreak
3922       for option `pdfborder'.\MessageBreak
3923       Option setting is ignored%
3924     }%
3925     \let\@pdfborder\Hy@temp

```

```

3926 }%
3927 }
3928 \define@key{Hyp}{pdfborderstyle}{%
3929 \let\Hy@temp\@pdfborderstyle
3930 \def\@pdfborderstyle{#1}%
3931 \Hy@Match\@pdfborderstyle}{%
3932 ~%
3933 ( */Type */Border%
3934 | */W +\HyPat@NonNegativeReal/%
3935 | */S */[SDBIU]%
3936 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3937 )* *$%
3938 }{}{%
3939 \Hy@Warning{%
3940 Invalid value `\'@pdfborderstyle'\MessageBreak
3941 for option `pdfborderstyle'.\MessageBreak
3942 Option setting is ignored%
3943 }%
3944 \let\@pdfborderstyle\Hy@temp
3945 }%
3946 }
3947 \def\Hy@setpdfborder{%
3948 \ifx\@pdfborder\@empty
3949 \else
3950 /Border[\@pdfborder]%
3951 \fi
3952 \ifx\@pdfborderstyle\@empty
3953 \else
3954 /BS<<\@pdfborderstyle>>%
3955 \fi
3956 }
3957 \Hy@DefNameKey{pdfpagemode}{%
3958 \do{UseNone}{}%
3959 \do{UseOutlines}{}%
3960 \do{UseThumbs}{}%
3961 \do{FullScreen}{}%
3962 \do{UseOC}{PDF 1.5}%
3963 \do{UseAttachments}{PDF 1.6}%
3964 }
3965 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3966 \do{UseNone}{}%
3967 \do{UseOutlines}{}%
3968 \do{UseThumbs}{}%
3969 \do{FullScreen}{}%
3970 \do{UseOC}{PDF 1.5}%
3971 \do{UseAttachments}{PDF 1.6}%
3972 }
3973 \Hy@DefNameKey{pdfdirection}{%
3974 \do{L2R}{Left to right}%
3975 \do{R2L}{Right to left}%
3976 }
3977 \Hy@DefNameKey{pdfviewarea}{%
3978 \do{MediaBox}{}%
3979 \do{CropBox}{}%
3980 \do{BleedBox}{}%
3981 \do{TrimBox}{}%
3982 \do{ArtBox}{}%

```

```

3983 }
3984 \Hy@DefNameKey{pdfviewclip}{%
3985   \do{MediaBox}{}%
3986   \do{CropBox}{}%
3987   \do{BleedBox}{}%
3988   \do{TrimBox}{}%
3989   \do{ArtBox}{}%
3990 }
3991 \Hy@DefNameKey{pdfprintarea}{%
3992   \do{MediaBox}{}%
3993   \do{CropBox}{}%
3994   \do{BleedBox}{}%
3995   \do{TrimBox}{}%
3996   \do{ArtBox}{}%
3997 }
3998 \Hy@DefNameKey{pdfprintclip}{%
3999   \do{MediaBox}{}%
4000   \do{CropBox}{}%
4001   \do{BleedBox}{}%
4002   \do{TrimBox}{}%
4003   \do{ArtBox}{}%
4004 }
4005 \Hy@DefNameKey{pdfprintscaling}{%
4006   \do{AppDefault}{}%
4007   \do{None}{}%
4008 }
4009 \Hy@DefNameKey{pdfduplex}{%
4010   \do{Simplex}{}%
4011   \do{DuplexFlipShortEdge}{}%
4012   \do{DuplexFlipLongEdge}{}%
4013 }
4014 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
4015   \do{true}{}%
4016   \do{false}{}%
4017 }
4018 \define@key{Hyp}{pdfprintpagerange}{%
4019   \def\@pdfprintpagerange{#1}%
4020 }
4021 \Hy@DefNameKey{pdfnumcopies}{%
4022   \do{2}{two copies}%
4023   \do{3}{three copies}%
4024   \do{4}{four copies}%
4025   \do{5}{five copies}%
4026 }
4027 \define@key{Hyp}{pdfusetitle}[true]{%
4028   \Hy@boolkey{pdfusetitle}{#1}%
4029 }
4030 \def\HyXeTeX@CheckUnicode{%
4031   \ifxetex
4032     \ifHy@unicode
4033     \else
4034       \Hy@WarningNoLine{%
4035         XeTeX driver only supports unicode.\MessageBreak
4036         Enabling option `unicode'%
4037       }%
4038       \kvsetkeys{Hyp}{unicode}%
4039     \fi

```

```

4040 \else
4041   \let\HyXeTeX@CheckUnicode\relax
4042 \fi
4043 }
4044 \def\HyPsd@PrerenderUnicode#1{%
4045   \begingroup
4046     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4047     \else
4048       \sbox0{%
4049         \let\GenericInfo\@gobbletwo
4050         \let\GenericWarning\@gobbletwo
4051         \let\GenericError\@gobblefour
4052         \PrerenderUnicode{#1}%
4053       }%
4054     \fi
4055   \endgroup
4056 }
4057 \define@key{Hyp}{pdftitle}{%
4058   \HyXeTeX@CheckUnicode
4059   \HyPsd@XeTeXBigCharstrue
4060   \HyPsd@PrerenderUnicode{#1}%
4061   \pdfstringdef\@pdftitle{#1}%
4062 }
4063 \define@key{Hyp}{pdfauthor}{%
4064   \HyXeTeX@CheckUnicode
4065   \HyPsd@XeTeXBigCharstrue
4066   \HyPsd@PrerenderUnicode{#1}%
4067   \pdfstringdef\@pdfauthor{#1}%
4068 }
4069 \define@key{Hyp}{pdfproducer}{%
4070   \HyXeTeX@CheckUnicode
4071   \HyPsd@XeTeXBigCharstrue
4072   \HyPsd@PrerenderUnicode{#1}%
4073   \pdfstringdef\@pdfproducer{#1}%
4074 }
4075 \define@key{Hyp}{pdfcreator}{%
4076   \HyXeTeX@CheckUnicode
4077   \HyPsd@XeTeXBigCharstrue
4078   \HyPsd@PrerenderUnicode{#1}%
4079   \pdfstringdef\@pdfcreator{#1}%
4080 }
4081 \define@key{Hyp}{addtopdfcreator}{%
4082   \HyXeTeX@CheckUnicode
4083   \HyPsd@XeTeXBigCharstrue
4084   \HyPsd@PrerenderUnicode{#1}%
4085   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4086 }
4087 \define@key{Hyp}{pdfcreationdate}{%
4088   \begingroup
4089     \Hy@unicodedefalse
4090     \pdfstringdef\@pdfcreationdate{#1}%
4091   \endgroup
4092 }
4093 \define@key{Hyp}{pdfmoddate}{%
4094   \begingroup
4095     \Hy@unicodedefalse
4096     \pdfstringdef\@pdfmoddate{#1}%

```

```

4097 \endgroup
4098 }
4099 \define@key{Hyp}{pdfsubject}{%
4100 \HyXeTeX@CheckUnicode
4101 \HyPsd@XeTeXBigCharstrue
4102 \HyPsd@PrerenderUnicode{#1}%
4103 \pdfstringdef\@pdfsubject{#1}%
4104 }
4105 \define@key{Hyp}{pdfkeywords}{%
4106 \HyXeTeX@CheckUnicode
4107 \HyPsd@XeTeXBigCharstrue
4108 \HyPsd@PrerenderUnicode{#1}%
4109 \pdfstringdef\@pdfkeywords{#1}%
4110 }
4111 \define@key{Hyp}{pdftrapped}{%
4112 \lowercase{\edef\Hy@temp{#1}}%
4113 \ifx\Hy@temp\HyInfo@trapped@true
4114 \def\@pdftrapped{True}%
4115 \else
4116 \ifx\Hy@temp\HyInfo@trapped@false
4117 \def\@pdftrapped{False}%
4118 \else
4119 \ifx\Hy@temp\HyInfo@trapped@unknown
4120 \def\@pdftrapped{Unknown}%
4121 \else
4122 \ifx\Hy@temp\@empty
4123 \else
4124 \Hy@Warning{%
4125   Unsupported value `#1'\MessageBreak
4126   for option `pdftrapped'%
4127 }%
4128 \fi
4129 \def\@pdftrapped{}%
4130 \fi
4131 \fi
4132 \fi
4133 }
4134 \def\HyInfo@trapped@true{true}
4135 \def\HyInfo@trapped@false{false}
4136 \def\HyInfo@trapped@unknown{unknown}
4137 \def\HyInfo@TrappedUnsupported{%
4138 \ifx\@pdftrapped\@empty
4139 \else
4140 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
4141 \gdef\HyInfo@TrappedUnsupported{}%
4142 \fi
4143 }
4144 \define@key{Hyp}{pdfinfo}{%
4145 \kvsetkeys{pdfinfo}{#1}%
4146 }
4147 \def\Hy@temp#1{%
4148 \lowercase{\Hy@temp@A{#1}}{#1}%
4149 }
4150 \def\Hy@temp@A#1#2{%
4151 \define@key{pdfinfo}{#2}{%
4152 \hypersetup{pdf#1={#1}}%
4153 }%

```

```

4154 }
4155 \Hy@temp{Title}
4156 \Hy@temp{Author}
4157 \Hy@temp{Keywords}
4158 \Hy@temp{Subject}
4159 \Hy@temp{Creator}
4160 \Hy@temp{Producer}
4161 \Hy@temp{CreationDate}
4162 \Hy@temp{ModDate}
4163 \Hy@temp{Trapped}
4164 \newif\ifHyInfo@AddonUnsupported
4165 \kv@set@family@handler{pdfinfo}{%
4166   \HyInfo@AddonHandler{#1}{#2}%
4167 }
4168 \let\HyInfo@do\relax
4169 \def\HyInfo@AddonHandler#1#2{%
4170   \ifx\kv@value\relax
4171     \Hy@Warning{%
4172       Option `pdfinfo': ignoring key `\'kv@key' without value%
4173     }%
4174   \else
4175     \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
4176     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4177     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4178       \ifHyInfo@AddonUnsupported
4179         \Hy@Warning{%
4180           This driver does not support additional\MessageBreak
4181           information entries, therefore\MessageBreak
4182           `\'kv@key' is ignored%
4183         }%
4184       \else
4185         \def\HyInfo@tmp###1{%
4186           \kv@define@key{pdfinfo}{###1}{%
4187             \HyXeTeX@CheckUnicode
4188             \HyPsd@XeTeXBigCharstrue
4189             \HyPsd@PrerenderUnicode{####1}%
4190             \pdfstringdef\HyInfo@Value{####1}%
4191             \global\expandafter
4192             \let\csname HyInfo@Value@##1\endcsname
4193             \HyInfo@Value
4194           }%
4195         }%
4196         \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4197         \global\expandafter
4198         \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4199         \csname KV@pdfinfo@\HyInfo@Key\endcsname
4200         \xdef\HyInfo@AddonList{%
4201           \HyInfo@AddonList
4202           \HyInfo@do{\HyInfo@Key}%
4203         }%
4204         \kv@parse@normalized{%
4205           \HyInfo@Key={#2}%
4206         }{%
4207           \kv@processor@default{pdfinfo}%
4208         }%
4209       \fi
4210     \else

```



```

4211 \kv@parse@normalized{%
4212 \HyInfo@Key={#2}%
4213 }{%
4214 \kv@processor@default{pdfinfo}%
4215 }%
4216 \fi
4217 \fi
4218 }
4219 \def\HyInfo@GenerateAddons{%
4220 \ifHyInfo@AddonUnsupported
4221 \def\HyInfo@Addons{%
4222 \else
4223 \begingroup
4224 \toks@{%
4225 \def\HyInfo@do##1{%
4226 \EdefEscapeName\HyInfo@Key{##1}%
4227 \edef\x{%
4228 \toks@{%
4229 \the\toks@
4230 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4231 }%
4232 }%
4233 \x
4234 }%
4235 \HyInfo@AddonList
4236 \edef\x{\endgroup
4237 \def\noexpand\HyInfo@Addons{\the\toks@}%
4238 }%
4239 \x
4240 \fi
4241 }
4242 \global\let\HyInfo@AddonList\ltx@empty

4243 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
4244 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4245 \let\setpdfinkmargin@gobble
4246 \def\calculate@pdfview#1 #2\{%
4247 \def\@pdfview{#1}%
4248 \ifx\#2\%
4249 \def\@pdfviewparams{-32768}%
4250 \else
4251 \def\@pdfviewparams{#2}%
4252 \fi
4253 }
4254 \begingroup\expandafter\expandafter\expandafter\endgroup
4255 \expandafter\ifx\csname numexpr\endcsname\relax
4256 \def\Hy@number#1{%
4257 \expandafter\@firstofone\expandafter{\number#1}%
4258 }%
4259 \else
4260 \def\Hy@number#1{%
4261 \the\numexpr#1\relax
4262 }%
4263 \fi
4264 \define@key{Hyp}{pdfstartpage}{%
4265 \ifx\#1\%
4266 \let\@pdfstartpage\ltx@empty
4267 \else

```

```

4268 \edef\@pdfstartpage{\Hy@number{#1}}%
4269 \fi
4270 }%
4271 \define@key{Hyp}{pdfstartview}{%
4272 \ifx\#1\%
4273 \let\@pdfstartview\ltx@empty
4274 \else
4275 \hypercalcbpdef\@pdfstartview{/#1}%
4276 \fi
4277 }
4278 \def\HyPat@NonNegativeReal/{%
4279 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4280 }
4281 \define@key{Hyp}{pdfremotestartview}{%
4282 \ifx\#1\%
4283 \def\@pdfremotestartview{/Fit}%
4284 \else
4285 \hypercalcbpdef\@pdfremotestartview{#1}%
4286 \edef\@pdfremotestartview{\@pdfremotestartview}%
4287 \Hy@Match\@pdfremotestartview{}{%
4288 ^{XYZ}%
4289 ()| %
4290 (null|?\HyPat@NonNegativeReal/) %
4291 (null|?\HyPat@NonNegativeReal/) %
4292 (null|\HyPat@NonNegativeReal/)%
4293 )| % end of "XYZ"
4294 Fit%
4295 ()| %
4296 B| %
4297 (H|V|BH|BV)(%
4298 ()| %
4299 (null|\HyPat@NonNegativeReal/)%
4300 )| %
4301 R %
4302 \HyPat@NonNegativeReal/ %
4303 \HyPat@NonNegativeReal/ %
4304 \HyPat@NonNegativeReal/ %
4305 \HyPat@NonNegativeReal/%
4306 )% end of "Fit"
4307 )$%
4308 }{}{%
4309 \Hy@Warning{%
4310 Invalid value ``\@pdfremotestartview'\MessageBreak
4311 of `pdfremotestartview'\MessageBreak
4312 is replaced by `Fit'%
4313 }%
4314 \let\@pdfremotestartview\@empty
4315 }%
4316 \ifx\@pdfremotestartview\@empty
4317 \def\@pdfremotestartview{/Fit}%
4318 \else
4319 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4320 \fi
4321 \fi
4322 }
4323 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4324 \define@key{Hyp}{pdftoolbar}[true]{%

```

```

4325 \Hy@boolkey{pdftoolbar}{#1}%
4326 }
4327 \define@key{Hyp}{pdfmenubar}[true]{%
4328 \Hy@boolkey{pdfmenubar}{#1}%
4329 }
4330 \define@key{Hyp}{pdfwindowui}[true]{%
4331 \Hy@boolkey{pdfwindowui}{#1}%
4332 }
4333 \define@key{Hyp}{pdffitwindow}[true]{%
4334 \Hy@boolkey{pdffitwindow}{#1}%
4335 }
4336 \define@key{Hyp}{pdfcenterwindow}[true]{%
4337 \Hy@boolkey{pdfcenterwindow}{#1}%
4338 }
4339 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4340 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4341 }
4342 \define@key{Hyp}{pdfa}[true]{%
4343 \Hy@boolkey{pdfa}{#1}%
4344 }
4345 \define@key{Hyp}{pdfnewwindow}[true]{%
4346 \def\Hy@temp{#1}%
4347 \ifx\Hy@temp\empty
4348 \Hy@pdfnewwindowsetfalse
4349 \else
4350 \Hy@pdfnewwindowsettrue
4351 \Hy@boolkey{pdfnewwindow}{#1}%
4352 \fi
4353 }
4354 \def\Hy@SetNewWindow{%
4355 \ifHy@pdfnewwindowset
4356 /NewWindow %
4357 \ifHy@pdfnewwindow true\else false\fi
4358 \fi
4359 }
4360 \Hy@DefNameKey{pdfpagelayout}{%
4361 \do{SinglePage}{}%
4362 \do{OneColumn}{}%
4363 \do{TwoColumnLeft}{}%
4364 \do{TwoColumnRight}{}%
4365 \do{TwoPageLeft}{PDF 1.5}%
4366 \do{TwoPageRight}{PDF 1.5}%
4367 }
4368 \define@key{Hyp}{pdflang}{%
4369 \edef\@pdflang{#1}%
4370 \def\Hy@temp{\relax}%
4371 \ifx\@pdflang\Hy@temp
4372 \let\@pdflang\relax
4373 \fi
4374 \ifx\@pdflang\relax
4375 \else
4376 \ifx\@pdflang\ltx@empty
4377 \else

```

Test according to ABNF of RFC 3066.

```

4378 \Hy@Match\@pdflang{icase}{%
4379 ~%
4380 [a-z]{1,8}%

```

```

4381      (-[a-z0-9]{1,8})*%
4382      $%
4383      }{%

```

Test according to ABNF of RFC 5646.

```

4384      \Hy@Match\@pdflang{icase}{%
4385      ^%
4386      (%
4387      % langtag
4388      (% language
4389      [a-z]{2,3}%
4390      ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4391      |[a-z]{4}% reserved for future use
4392      |[a-z]{5,8}% registered language subtag
4393      )%
4394      (-[a-z]{4})?% script
4395      (-([a-z]{2}|[0-9]{3}))?% region
4396      (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4397      (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4398      (-x(-[a-z0-9]{1,8})+)?% privateuse
4399      % privateuse
4400      |x(-[a-z0-9]{1,8})+%
4401      % grandfathered/irregular
4402      |en-GB-oed%
4403      |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4404      mingo|navajo|pwn|tao|tay|tsu)%
4405      |sgn-(BE-FR|BE-NL|CH-DE)%
4406      % grandfathered/regular
4407      |art-lojban%
4408      |cel-gaulish%
4409      |no-(bok|nyn)%
4410      |zh-(guoyu|hakka|min|min-nan|xiang)%
4411      )%
4412      $%
4413      }{%

```

Test for unique extensions.

```

4414      \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4415      \Hy@Match\@pdflang{icase}{~x-}{}%
4416      % remove privateuse
4417      \edef\Hy@temp{-\@pdflang}%
4418      \Hy@Match\Hy@temp{icase}{}%
4419      ^%
4420      (%
4421      (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4422      )%
4423      -x-%
4424      }{%
4425      \edef\Hy@temp{%
4426      \expandafter\strip@prefix\pdfastmatch1%
4427      }%
4428      }{}%
4429      \Hy@Match\Hy@temp{icase}{}%
4430      (-[a-wyz0-9]-).*\ltx@backslashchar1%
4431      }{%
4432      \Hy@Warning{%
4433      Invalid language identifier `#1'\MessageBreak
4434      for option `pdflang', because it violates\MessageBreak

```

```

4435         well-formedness defined in RFC 4646\MessageBreak
4436         by duplicate singleton subtags%
4437     }%
4438     \let\@pdflang\relax
4439 }{}%
4440 }%
4441 }{}%

```

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

```

4442 \ifx\@pdflang\relax
4443 \else
4444   \Hy@Match\@pdflang{icase}{%
4445     ~%
4446     [a-zA-Z]{2}-%
4447     (%
4448       aa|AA|%
4449       [qQ][m-zA-Z]|%
4450       [xX][a-zA-Z]|%
4451       zz|ZZ%
4452     )%
4453     (-|$)%
4454   }{%
4455     \Hy@Warning{%
4456       Invalid language identifier `#1'\MessageBreak
4457       for option `pdflang' because of invalid country code%
4458       \MessageBreak
4459       in second subtag (RFC 3066)%
4460     }%
4461     \let\@pdflang\relax
4462   }{}%
4463 \fi
4464 }{%
4465   \Hy@Warning{%
4466     Invalid language identifier `#1'\MessageBreak
4467     for option `pdflang', because it violates\MessageBreak
4468     well-formedness defined in RFC 5646%
4469   }%
4470   \let\@pdflang\relax
4471 }%
4472 }{%
4473   \Hy@Warning{%
4474     Invalid language identifier `#1'\MessageBreak
4475     for option `pdflang' (RFC 3066)%
4476   }%
4477   \let\@pdflang\relax
4478 }%
4479 \fi
4480 \fi
4481 }
4482 \define@key{Hyp}{pdfpagelabels}[true]{%
4483   \Hy@boolkey{pdfpagelabels}{#1}%
4484 }
4485 \define@key{Hyp}{pdfescapeform}[true]{%
4486   \Hy@boolkey{pdfescapeform}{#1}%
4487 }

```

Default values:

```

4488 \def\@linkbordercolor{1 0 0}

```

```

4489 \def\@urlbordercolor{0 1 1}
4490 \def\@menubordercolor{1 0 0}
4491 \def\@filebordercolor{0 .5 .5}
4492 \def\@runbordercolor{0 .7 .7}
4493 \def\@citebordercolor{0 1 0}
4494 \def\@pdfhighlight{/I}
4495 \let\@pdftitle\ltx@empty
4496 \let\@pdfauthor\ltx@empty
4497 \let\@pdfproducer\relax
4498 \def\@pdfcreator{LaTeX with hyperref}
4499 \let\@pdfcreationdate\ltx@empty
4500 \let\@pdfmoddate\ltx@empty
4501 \let\@pdfsubject\ltx@empty
4502 \let\@pdfkeywords\ltx@empty
4503 \let\@pdftrapped\ltx@empty
4504 \let\@pdfpagescrop\ltx@empty
4505 \def\@pdfstartview{/Fit}
4506 \def\@pdfremotestartview{/Fit}
4507 \def\@pdfstartpage{1}
4508 \let\@pdfprintpagerange\ltx@empty
4509 \let\@pdflang\relax
4510 \let\PDF@SetupDoc\@empty
4511 \let\PDF@FinishDoc\@empty
4512 \let\phantomsection\@empty
4513 \let\special@paper\@empty
4514 \def\HyperDestNameFilter#1{#1}
4515 \Hy@AtBeginDocument{%
4516   \begingroup
4517     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4518     \dimen@=\x\relax
4519     \ifdim\dimen@>\z@
4520       \else
4521         \dimen@=11in\relax
4522         \Hy@WarningNoLine{%
4523           Height of page (\expandafter\string\x) %
4524           is invalid (\the\x),\MessageBreak
4525           using 11in%
4526         }%
4527       \fi
4528       \dimen@=0.99626401\dimen@
4529       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4530     \endgroup
4531   }
4532 \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.

```

4533 \let\hyper@normalise\ExecuteOptions
4534 \let\ExecuteOptions\hypersetup
4535 \Hy@RestoreCatcodes
4536 \InputIfFileExists{hyperref.cfg}{-}{-}
4537 \Hy@SetCatcodes
4538 \let\ExecuteOptions\hyper@normalise
4539 \ifx\Hy@MaybeStopNow\relax
4540 \else
4541   \Hy@stoppeardearlytrue
4542   \expandafter\Hy@MaybeStopNow

```

```

4543 \fi
4544 \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.

```

4545 \SetupKeyvalOptions{family=Hyp}
4546 \DeclareLocalOptions{%
4547   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4548 }

```

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

```

4549 \@ifpackagewith{hyperref}{tex4ht}{%
4550 }{%
4551   \@ifpackageloaded{tex4ht}{%
4552     \PassOptionsToPackage{tex4ht}{hyperref}%
4553   }{%
4554     \ltx@ifundefined{HCode}{%
4555     }{%
4556       \begingroup
4557       \def\Hy@pkg{tex4ht}%
4558       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4559         \def\Hy@param{#2#3}%
4560         \ifx\Hy@param\ltx@empty
4561           \expandafter\ltx@gobble
4562         \else
4563           \def\Hy@param{#3}%
4564           \ifx\Hy@param\Hy@pkg
4565             \PassOptionsToPackage{#2}{tex4ht}%
4566             \expandafter\expandafter\expandafter\@gobble
4567           \else
4568             \expandafter\expandafter\expandafter\ltx@firstofone
4569           \fi
4570         \fi
4571         {\Hy@temp@A#4\Hy@NIL}%
4572       }%
4573       \expandafter
4574       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4575     \endgroup
4576     \PassOptionsToPackage{tex4ht}{hyperref}%
4577   }%
4578 }%
4579 }

4580 \let\ReadBookmarks\relax
4581 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4582 \def\Hy@xspace@end{}
4583 \ltx@ifundefined{xspaceaddexceptions}{%
4584   \Hy@AtBeginDocument{%
4585     \ltx@ifundefined{xspaceaddexceptions}{%
4586     }{%
4587       \def\Hy@xspace@end{%
4588         \ltx@gobble{end for xspace}%
4589       }%
4590       \xspaceaddexceptions{%

```

```

4591 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4592 }%
4593 }%
4594 }%
4595 }{%
4596 \def\Hy@xspace@end{%
4597 \ltx@gobble{end for xspace}%
4598 }%
4599 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4600 }

```

15.2 Option draft

```

4601 \Hy@AtBeginDocument{%
4602 \ifHy@draft
4603 \let\hyper@@anchor\@gobble
4604 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4605 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4606 \def\hyper@anchorend{\Hy@xspace@end}%
4607 \let\hyper@linkstart\@gobbletwo
4608 \def\hyper@linkend{\Hy@xspace@end}%
4609 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4610 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4611 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4612 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4613 \let\PDF@SetupDoc\@empty
4614 \let\PDF@FinishDoc\@empty
4615 \let\@fifthoffive\@secondoftwo
4616 \let\@secondoffive\@secondoftwo
4617 \let\ReadBookmarks\relax
4618 \let\WriteBookmarks\relax
4619 \Hy@WarningNoLine{Draft mode on}%
4620 \fi
4621 \Hy@DisableOption{draft}%
4622 \Hy@DisableOption{nolinks}%
4623 \Hy@DisableOption{final}%
4624 }

```

15.3 PDF/A

```

4625 \Hy@DisableOption{pdfa}
4626 \ifHy@pdfa
4627 \ifnum \Hy@pdfversion < 4
4628 \kvsetkeys{Hyp}{pdfversion=1.4}%
4629 \fi
4630 \Hy@DisableOption{pdfversion}%
4631 \def\Hy@Acrobatmenu#1#2{%
4632 \leavevmode
4633 \begingroup
4634 \edef\x{#1}%
4635 \@onelevel@sanitize\x
4636 \ifx\x\Hy@NextPage
4637 \let\y=Y%
4638 \else
4639 \ifx\x\Hy@PrevPage
4640 \let\y=Y%
4641 \else
4642 \ifx\x\Hy@FirstPage
4643 \let\y=Y%

```



```

4644         \else
4645             \ifx\x\Hy@LastPage
4646                 \let\y=Y%
4647             \else
4648                 \let\y=N%
4649             \fi
4650         \fi
4651     \fi
4652 \fi
4653 \expandafter\endgroup
4654 \ifx\y Y%
4655 \else
4656     \Hy@Error{%
4657         PDF/A: Named action `#1' is not permitted%
4658     }\@ehc
4659     {#2}%
4660     \expandafter\@gobble
4661 \fi
4662 }%
4663 \def\Hy@temp#1{%
4664     \expandafter\def\csname Hy@#1\endcsname{#1}%
4665     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4666 }%
4667 \Hy@temp{NextPage}%
4668 \Hy@temp{PrevPage}%
4669 \Hy@temp{FirstPage}%
4670 \Hy@temp{LastPage}%
4671 \else
4672     \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4673 \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.

```

4674 \Hy@nextfalse
4675 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4676 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4677 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4678 \ifHy@next
4679     \let\texttilde\~%
4680 \fi

4681 \def\Hy@wrapper@babel#1#2{%
4682     \begingroup
4683         \Hy@safe@activetrue
4684         \set@display@protect
4685         \edef\x{#2}%
4686         \@onelevel@sanitize\x
4687         \toks@{#1}%
4688         \edef\x{\endgroup\the\toks@{\x}}%
4689         \x
4690     }
4691 \def\Hy@WrapperDef#1{%
4692     \begingroup
4693         \escapechar=\m@ne
4694         \xdef\Hy@gtemp{%

```

```

4695 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4696 }%
4697 \endgroup
4698 \edef#1{%
4699 \noexpand\Hy@wrapper@babel
4700 \expandafter\noexpand\Hy@gtemp
4701 }%
4702 \expandafter\def\Hy@gtemp
4703 }

4704 \ifHy@hyperfigures
4705 \Hy@Info{Hyper figures ON}%
4706 \else
4707 \Hy@Info{Hyper figures OFF}%
4708 \fi
4709 \ifHy@nesting
4710 \Hy@Info{Link nesting ON}%
4711 \else
4712 \Hy@Info{Link nesting OFF}%
4713 \fi
4714 \ifHy@hyperindex
4715 \Hy@Info{Hyper index ON}%
4716 \else
4717 \Hy@Info{Hyper index OFF}%
4718 \fi
4719 \ifHy@plainpages
4720 \Hy@Info{Plain pages ON}%
4721 \else
4722 \Hy@Info{Plain pages OFF}%
4723 \fi
4724 \ifHy@backref
4725 \Hy@Info{Backreferencing ON}%
4726 \else
4727 \Hy@Info{Backreferencing OFF}%
4728 \fi
4729 \ifHy@typexml
4730 \Hy@AtEndOfPackage{%
4731 \RequirePackage{color}%
4732 \RequirePackage{nameref}[2012/07/28]%
4733 }%
4734 \fi
4735 \Hy@DisableOption{typexml}
4736 \ifHy@implicit
4737 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4738 \else
4739 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4740 \def\MaybeStopEarly{%
4741 \Hy@Message{Stopped early}%
4742 \Hy@AtBeginDocument{%
4743 \PDF@FinishDoc
4744 \gdef\PDF@FinishDoc{}}%
4745 }%
4746 \endinput
4747 }%
4748 \Hy@AtBeginDocument{%
4749 \let\autoref\ref
4750 \let\autopageref\pageref
4751 \ifx\@pdfpagemode\@empty

```

```

4752 \gdef\@pdfpagemode{UseNone}%
4753 \fi
4754 \global\Hy@backreffalse
4755 }%
4756 \Hy@AtEndOfPackage{%
4757 \global\let\ReadBookmarks\relax
4758 \global\let\WriteBookmarks\relax
4759 }%
4760 \fi
4761 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4762 \Hy@AtEndOfPackage{%
4763 \ifpackageloaded{tex4ht}{%
4764 \def\Hy@driver{htex4ht}%
4765 \Hy@texhttrue
4766 }{}%

```

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.

```

4767 \ifx\Hy@driver\@empty
4768 \else
4769 \ifx\pdfextension\@undefined
4770 \def\Hy@temp{hpdfTeX}%
4771 \else
4772 \def\Hy@temp{hluatex}%
4773 \fi
4774 \ifpdf
4775 \ifx\Hy@driver\Hy@temp
4776 \else
4777 \Hy@WarningNoLine{%
4778 Wrong driver ``\Hy@driver.def';\MessageBreak
4779 pdfTeX is running in PDF mode.\MessageBreak
4780 Forcing driver ``\Hy@temp.def'%
4781 }%
4782 \let\Hy@driver\Hy@temp
4783 \fi
4784 \else
4785 \ifx\Hy@driver\Hy@temp
4786 \Hy@WarningNoLine{%
4787 Wrong driver ``\Hy@driver.def';\MessageBreak
4788 pdfTeX is not running in PDF mode.\MessageBreak
4789 Using default driver%
4790 }%
4791 \let\Hy@driver\@empty
4792 \fi
4793 \fi
4794 \fi
4795 \ifHy@texht
4796 \else
4797 \ifx\Hy@driver\@empty
4798 \else
4799 \def\Hy@temp{hxetex}%
4800 \ifxetex
4801 \ifx\Hy@driver\Hy@temp
4802 \else
4803 \Hy@WarningNoLine{%

```

```

4804         Wrong driver ``\Hy@driver.def';\MessageBreak
4805         XeTeX is running.\MessageBreak
4806         Forcing driver ``\Hy@temp.def' for XeTeX%
4807     }%
4808     \let\Hy@driver\Hy@temp
4809 \fi
4810 \fi
4811 \fi
4812 \fi
4813 \ifx\Hy@driver\@empty
4814 \else
4815     \def\Hy@temp{hvtexhtm}%
4816     \ifvtexhtml
4817         \ifx\Hy@driver\Hy@temp
4818         \else
4819             \Hy@WarningNoLine{%
4820                 Wrong driver ``\Hy@driver.def';\MessageBreak
4821                 VTeX is running in HTML mode.\MessageBreak
4822                 Forcing driver ``\Hy@temp.def'%
4823             }%
4824             \let\Hy@driver\Hy@temp
4825         \fi
4826     \else
4827         \ifx\Hy@driver\Hy@temp
4828             \Hy@WarningNoLine{%
4829                 Wrong driver ``\Hy@driver.def';\MessageBreak
4830                 VTeX is not running in HTML mode.\MessageBreak
4831                 Using default driver%
4832             }%
4833             \let\Hy@driver\@empty
4834         \fi
4835     \fi
4836 \fi

```

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

```

4837 \let\HyOpt@DriverType\ltx@empty
4838 \ifx\HyOpt@CustomDriver\ltx@empty
4839     \ifx\Hy@driver\@empty
4840         \def\HyOpt@DriverType{ (autodetected)}%
4841         \providecommand*{\Hy@defaultdriver}{hypertex}%
4842         \ifpdf
4843             \ifx\pdfextension\@undefined
4844                 \def\Hy@driver{hpdfTeX}%
4845             \else
4846                 \def\Hy@driver{hluatex}%
4847             \fi
4848         \else
4849             \ifxetex
4850                 \def\Hy@driver{hxetex}%
4851             \else
4852                 \ifvtexhtml
4853                     \def\Hy@driver{hvtexhtm}%
4854                 \def\MaybeStopEarly{%
4855                     \Hy@Message{Stopped early}%
4856                     \Hy@AtBeginDocument{%
4857                         \PDF@FinishDoc
4858                         \gdef\PDF@FinishDoc{}}%
4859                 }%

```

```

4860         \endinput
4861     }%
4862 \else
4863     \ifvtexpdf
4864         \def\Hy@driver{hvtex}%
4865     \else
4866         \ifvtexps
4867             \def\Hy@driver{hvtex}%
4868         \else
4869             \ifx\HyOpt@DriverFallback\ltx@empty
4870                 \let\Hy@driver\Hy@defaultdriver
4871                 \def\HyOpt@DriverType{ (default)}%
4872             \else
4873                 \begingroup
4874                 \toks@\expandafter{\HyOpt@DriverFallback}%
4875                 \edef\x{\endgroup
4876                     \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4877                 }%
4878                 \x
4879                 \ifx\Hy@driver\ltx@empty
4880                     \let\Hy@driver\Hy@defaultdriver
4881                     \def\HyOpt@DriverType{ (default)}%
4882                 \else
4883                     \def\HyOpt@DriverType{ (fallback)}%
4884                 \fi
4885             \fi
4886         \fi
4887     \fi
4888 \fi
4889 \fi
4890 \fi
4891 \ifx\Hy@driver\Hy@defaultdriver
4892     \def\Hy@temp{hdvwind}%
4893     \ifx\Hy@temp\Hy@driver
4894         \kvsetkeys{Hyp}{colorlinks}%
4895         \PassOptionsToPackage{dviwindo}{color}%
4896     \fi
4897 \fi
4898 \fi
4899 \else
4900     \def\HyOpt@DriverType{ (custom)}%
4901     \let\Hy@driver\HyOpt@CustomDriver
4902 \fi
4903 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4904 \chardef\Hy@VersionChecked=0 %
4905 \input{\Hy@driver.def}%
4906 \ifcase\Hy@VersionChecked
4907     \Hy@VersionCheck{\Hy@driver.def}%
4908 \fi
4909 \let\@unprocessedoptions\relax
4910 \Hy@RestoreCatcodes
4911 \Hy@DisableOption{tex4ht}%
4912 \Hy@DisableOption{pdftex}%
4913 \Hy@DisableOption{nativepdf}%
4914 \Hy@DisableOption{dvipdfm}%
4915 \Hy@DisableOption{dvipdfmx}%
4916 \Hy@DisableOption{dvipdfmx-outline-open}%

```

```

4917 \Hy@DisableOption{pdfmark}%
4918 \Hy@DisableOption{dvips}%
4919 \Hy@DisableOption{hypertex}%
4920 \Hy@DisableOption{vtex}%
4921 \Hy@DisableOption{vtexpdfmark}%
4922 \Hy@DisableOption{dviwindo}%
4923 \Hy@DisableOption{dvipsone}%
4924 \Hy@DisableOption{textures}%
4925 \Hy@DisableOption{latex2html}%
4926 \Hy@DisableOption{ps2pdf}%
4927 \Hy@DisableOption{xetex}%
4928 \Hy@DisableOption{driverfallback}%
4929 \Hy@DisableOption{customdriver}%
4930 \Hy@DisableOption{pdfversion}%
4931 }

```

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.

```

4932 \newif\ifHy@DvipdfmxOutlineOpen
4933 \ifxetex
4934   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4935   \else
4936     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4937     \Hy@DvipdfmxOutlineOpenttrue
4938   \fi
4939 \fi
4940 \begingroup\expandafter\expandafter\expandafter\endgroup
4941 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4942 \else
4943   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4944     \Hy@DvipdfmxOutlineOpenttrue
4945   \fi
4946 \fi

```

15.4.2 Bookmarks

```

4947 \def\WriteBookmarks{0}
4948 \def\@bookmarkopenstatus#1{%
4949   \ifHy@bookmarksopen

```

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

```

4950   \ifnum#1<\expandafter\@firstofone\expandafter
4951     {\number\@bookmarkopenlevel} % explicit space
4952   \else
4953     -%
4954   \fi
4955 \else
4956   -%
4957 \fi
4958 }
4959 \ifHy@bookmarks
4960   \Hy@Info{Bookmarks ON}%
4961   \ifx\@pdfpagemode\@empty
4962     \def\@pdfpagemode{UseOutlines}%
4963   \fi
4964 \else
4965   \let\@bookmarkopenstatus\ltx@gobble

```

```

4966 \Hy@Info{Bookmarks OFF}%
4967 \Hy@AtEndOfPackage{%
4968   \global\let\ReadBookmarks\relax
4969   \global\let\WriteBookmarks\relax
4970 }%
4971 \ifx\@pdfpagemode\@empty
4972   \def\@pdfpagemode{UseNone}%
4973 \fi
4974 \fi
4975 \Hy@DisableOption{bookmarks}

```

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

```

4976 \def\Hy@CatcodeWrapper#1{%
4977   \let\Hy@endWrap\ltx@empty
4978   \def\TMP@EnsureCode##1##2{%
4979     \edef\Hy@endWrap{%
4980       \Hy@endWrap
4981       \catcode##1 \the\catcode##1\relax
4982     }%
4983     \catcode##1 ##2\relax
4984   }%
4985   \TMP@EnsureCode{10}{12}% ^^J
4986   \TMP@EnsureCode{33}{12}% !
4987   \TMP@EnsureCode{34}{12}% "
4988   \TMP@EnsureCode{36}{3}% $ (math)
4989   \TMP@EnsureCode{38}{4}% & (alignment)
4990   \TMP@EnsureCode{39}{12}% '
4991   \TMP@EnsureCode{40}{12}% (
4992   \TMP@EnsureCode{41}{12}% )
4993   \TMP@EnsureCode{42}{12}% *
4994   \TMP@EnsureCode{43}{12}% +
4995   \TMP@EnsureCode{44}{12}% ,
4996   \TMP@EnsureCode{45}{12}% -
4997   \TMP@EnsureCode{46}{12}% .
4998   \TMP@EnsureCode{47}{12}% /
4999   \TMP@EnsureCode{58}{12}% :
5000   \TMP@EnsureCode{59}{12}% ;
5001   \TMP@EnsureCode{60}{12}% <
5002   \TMP@EnsureCode{61}{12}% =
5003   \TMP@EnsureCode{62}{12}% >
5004   \TMP@EnsureCode{63}{12}% ?
5005   \TMP@EnsureCode{91}{12}% [
5006   \TMP@EnsureCode{93}{12}% ]
5007   \TMP@EnsureCode{94}{7}% ^ (superscript)
5008   \TMP@EnsureCode{95}{8}% _ (subscript)
5009   \TMP@EnsureCode{96}{12}% `
5010   \TMP@EnsureCode{124}{12}% |
5011   \TMP@EnsureCode{126}{13}% ~ (active)
5012   ##1\relax
5013   \Hy@endWrap
5014 }

```

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

```

5015 \Hy@AtBeginDocument{%
5016   \ifHy@ocgcolorlinks
5017     \kvsetkeys{Hyp}{colorlinks}%
5018   \ifHy@pdfa
5019     \Hy@Warning{%

```

```

5020     PDF/A: Optional Content Groups are prohibited,\MessageBreak
5021     using `colorlinks' instead of `ocgcolorlinks'%
5022 }%
5023 \Hy@ocgcolorlinksfalse
5024 \fi
5025 \fi
5026 \ifHy@ocgcolorlinks
5027 \else
5028 \Hy@DisableOption{ocgcolorlinks}%
5029 \fi
5030 \ifHy@colorlinks
5031 \def\@pdfborder{0 0 0}%
5032 \let\@pdfborderstyle\@empty
5033 \ifHy@typexml
5034 \else
5035 \Hy@CatcodeWrapper{%
5036 \RequirePackage{color}%
5037 }%
5038 \fi
5039 \def\Hy@colorlink#1{%
5040 \begingroup
5041 \HyColor@UseColor#1%
5042 }%
5043 \def\Hy@endcolorlink{\endgroup}%
5044 \Hy@Info{Link coloring ON}%
5045 \else
5046 \ifHy@frenchlinks
5047 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5048 \def\Hy@endcolorlink{\endgroup}%
5049 \Hy@Info{French linking ON}%
5050 \else
for grouping consistency:
5051 \def\Hy@colorlink#1{\begingroup}%
5052 \def\Hy@endcolorlink{\endgroup}%
5053 \Hy@Info{Link coloring OFF}%
5054 \fi
5055 \fi
5056 \Hy@DisableOption{colorlinks}%
5057 \Hy@DisableOption{frenchlinks}%
5058 \ifHy@texht
5059 \long\def\@firstoffive#1#2#3#4#5{#1}%
5060 \long\def\@secondoffive#1#2#3#4#5{#2}%
5061 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5062 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5063 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5064 \providecommand*\@safe@activetrue{}%
5065 \providecommand*\@safe@activesfalse{}%
5066 \def\T@ref#1{%
5067 \Hy@safe@activetrue
5068 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5069 \Hy@safe@activesfalse
5070 }%
5071 \def\T@pageref#1{%
5072 \Hy@safe@activetrue
5073 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5074 \Hy@safe@activesfalse
5075 }%

```



```

5076 \else
5077   \ifHy@typexml
5078   \else
5079     \Hy@CatcodeWrapper{%
5080       \RequirePackage{nameref}[2012/07/28]%
5081     }%
5082   \fi
5083 \fi
5084 \DeclareRobustCommand\ref{%
5085   \@ifstar\@refstar\T@ref
5086 }%
5087 \DeclareRobustCommand\pageref{%
5088   \@ifstar\@pagerefstar\T@pageref
5089 }%
5090 % \@ifclassloaded{memoir}{-%
5091 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5092 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5093 %   }%
5094 % } \ltx@secondoftwo
5095 % {%
5096 %   \DeclareRobustCommand*{\nameref}{-%
5097 %     \@ifstar\@mem@titlerefno link\@mem@titleref
5098 %   }%
5099 % }{%
5100   \DeclareRobustCommand*{\nameref}{-%
5101     \@ifstar\@namerefstar\T@nameref
5102   }%
5103 % }%
5104 \ifHy@implicit
5105 \else
5106   \let \@pagerefstar\T@pageref
5107   \let \@refstar\T@ref
5108   \let \@namerefstar\T@nameref
5109 \fi
5110 }
5111 \Hy@AtBeginDocument{%
5112   \ifHy@texht
5113   \else
5114     \Hy@CatcodeWrapper\ReadBookmarks
5115   \fi
5116 }
5117 \ifHy@backref
5118   \RequirePackage{backref}%
5119 \else
5120   \let\Hy@backout\@gobble
5121 \fi
5122 \Hy@DisableOption{backref}
5123 \Hy@DisableOption{pagebackref}
5124 \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.

```

5125 \begingroup
5126 \endlinechar=-1 %
5127 \catcode\^^A=14 %
5128 \catcode\^^M\active
5129 \catcode\%\active
5130 \catcode\#\active
5131 \catcode\_ \active
5132 \catcode\$ \active
5133 \catcode\& \active
5134 \gdef\hyper@normalise{^^A
5135   \begingroup
5136   \catcode\^^M\active
5137   \def^^M{ }^^A
5138   \catcode\%\active
5139   \let%\@percentchar
5140   \let\%\@percentchar
5141   \catcode\#\active
5142   \def#{\hyper@hash}^^A
5143   \def\#{\hyper@hash}^^A
5144   \@makeother\&^^A
5145   \edef&{\string&}^^A
5146   \edef\&{\string&}^^A
5147   \edef\textunderscore{\string_}^^A
5148   \let\_ \textunderscore
5149   \catcode\_ \active
5150   \let\_ \textunderscore
5151   \let~\hyper@tilde
5152   \let\~\hyper@tilde
5153   \let\textasciitilde\hyper@tilde
5154   \let\\ \@backslashchar
5155   \edef$\string$^^A
5156   \Hy@safe@activestrue
5157   \hyper@n@rmalise
5158 }^^A
5159 \catcode\#=6 ^^A
5160 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5161 \gdef\hyper@n@rmalise#1#2{^^A
5162   \def\Hy@tempa{#2}^^A
5163   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5164     \ltx@ReturnAfterElseFi{^^A
5165       \hyper@@normalise{#1}^^A
5166     }^^A
5167   \else
5168     \ltx@ReturnAfterFi{^^A
5169       \hyper@@normalise{#1}{#2}^^A
5170     }^^A
5171   \fi
5172 }^^A
5173 \gdef\hyper@@normalise#1#2{^^A
5174   \edef\Hy@tempa{^^A
5175     \endgroup
5176     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
5177   }^^A
5178   \Hy@tempa
5179 }^^A

```

```

5180 \gdef\Hy@RemovePercentCr#1%^~M#2\@nil{^^A
5181   #1^^A
5182   \ifx\limits#2\limits
5183   \else
5184     \ltx@ReturnAfterFi{^^A
5185     \Hy@RemovePercentCr #2\@nil
5186   }^^A
5187   \fi
5188 }^^A
5189 \endgroup
5190 \providecommand*\hyper@chars{%
5191   \let\#\hyper@hash
5192   \let\%\@percentchar
5193   \Hy@safe@activetrue
5194 }

5195 \def\hyperlink#1#2{%
5196   \hyper@@link{}\{#1\}{#2}%
5197 }

5198 \def\Hy@VerboseLinkStart#1#2{%
5199   \ifHy@verbose
5200     \begingroup
5201     \Hy@safe@activetrue
5202     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5203     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5204     \xdef\Hy@VerboseGlobalTemp{%
5205       \Hy@VerboseGlobalTemp, %
5206       line \the\inputlineno
5207     }%
5208     \endgroup
5209     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5210     \@onelevel@sanitize\Hy@VerboseLinkInfo
5211     \fi
5212 }

5213 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5214 \def\Hy@VerboseLinkStop{%
5215   \ifHy@verbose
5216     \begingroup
5217     \edef\x{\endgroup
5218       \write\m@ne{%
5219         Package `hyperref' Info: %
5220         End of reference \Hy@VerboseLinkInfo.%
5221       }%
5222     }%
5223     \x
5224   \fi
5225 }

5226 \def\Hy@VerboseAnchor#1{%
5227   \ifHy@verbose
5228     \begingroup
5229     \Hy@safe@activetrue
5230     \Hy@Info{Anchor ``\HyperDestNameFilter{#1}''}%
5231   \endgroup
5232   \fi
5233 }

5234 \def\Hy@AllowHyphens{%
5235   \relax

```

```

5236 \ifhmode
5237   \penalty\@M
5238   \hskip\z@skip
5239 \fi
5240 }

5241 \DeclareRobustCommand*\href}[1][]{%
5242   \begingroup
5243   \setkeys{href}{#1}%
5244   \@ifnextchar\bggroup\Hy@href{\hyper@normalise\href@}%
5245 }
5246 \def\Hy@href#%{
5247   \hyper@normalise\href@
5248 }
5249 \begingroup
5250 \catcode`\$=6 %
5251 \catcode`\#=12 %
5252 \gdef\href$1{\expandafter\href@split$1##\}%
5253 \gdef\href@split$1#2#3\\$4{%
5254   \hyper@link{$1}->{$2}->{$4}%
5255   \endgroup
5256 }%
5257 \endgroup

```

Option ‘page’.

```

5258 \define@key{href}{page}{%
5259   \def\Hy@href@page{#1}%
5260 }
5261 \let\Hy@href@page\@empty
5262 \newcount\c@Hy@tempcnt
5263 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5264 \def\Hy@MakeRemoteAction{%
5265   \ifx\Hy@href@page\@empty
5266     \def\Hy@href@page{0}%
5267   \else
5268     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5269     \ifnum\c@Hy@tempcnt<\@ne
5270       \Hy@Warning{%
5271         Invalid page number (\theHy@tempcnt)\MessageBreak
5272         for remote PDF file.\MessageBreak
5273         Using page 1%
5274       }%
5275       \def\Hy@href@page{0}%
5276     \else
5277       \global\advance\c@Hy@tempcnt\m@ne
5278       \edef\Hy@href@page{\theHy@tempcnt}%
5279     \fi
5280   \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.

```

5281 \ifx\Hy@href@nextactionraw\@empty
5282 \else
5283   \Hy@pdfnewwindowsettrue
5284   \Hy@pdfnewwindowtrue
5285 \fi
5286 }

```

Option ‘pdfremotestartview’.

```

5287 \define@key{href}{pdfremotestartview}{%
5288   \setkeys{Hyp}{pdfremotestartview={#1}}%
5289 }

```

Option ‘pdfnewwindow’.

```

5290 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5291 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5292 \newif\ifHy@href@ismap
5293 \define@key{href}{ismap}[true]{%
5294   \ltx@ifundefined{Hy@href@ismap#1}{%
5295     \Hy@Error{%
5296       Invalid value (#1) for key `ismap'.\MessageBreak
5297       Permitted values are `true' or `false'.\MessageBreak
5298       Ignoring `ismap'%
5299     }\@ehc
5300   }{%
5301     \csname Hy@href@ismap#1\endcsname
5302   }%
5303 }

```

Option ‘nextactionraw’.

```

5304 \let\Hy@href@nextactionraw\@empty
5305 \define@key{href}{nextactionraw}{%
5306   \edef\Hy@href@nextactionraw{#1}%
5307   \ifx\Hy@href@nextactionraw\@empty
5308     \else
5309       \Hy@Match\Hy@href@nextactionraw{}{%
5310         ^(\HyPat@ObjRef/|<<.*[/S[/].+>>|
5311         \[( ?\HyPat@ObjRef/|<<.*[/S[/].+>>)+ ?])$%
5312       }{%
5313         \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5314         \Hy@href@nextactionraw\MessageBreak
5315         The action is discarded%
5316       }%
5317     }%
5318     \ifx\Hy@href@nextactionraw\@empty
5319       \else
5320         \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5321       \fi
5322     \fi
5323   }
5324   \def\HyPat@ObjRef/{.+}

```

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

```

5325 \RequirePackage{url}
5326 \let\HyOrg@url\url
5327 \def\Hurl{\begingroup \Url}
5328 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5329 \def\nolinkurl@#1{\Hurl{#1}}
5330 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5331 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
5332 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5333 \providecommand\hyper@image[2]{#2}
5334 \def\hypertarget#1#2{%
5335   \ifHy@nesting
5336     \hyper@@anchor{#1}{#2}%

```

```

5337 \else
5338   \hyper@@anchor{#1}{\relax}#2%
5339 \fi
5340 }

```

`\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.

```

5341 \DeclareRobustCommand*\hyperref{%
5342   \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5343 }
5344 \def\Hy@babelnormalise#1[#2]{%
5345   \begingroup
5346     \Hy@safe@activestrue
5347     \edef\Hy@tempa{%
5348       \endgroup
5349       \noexpand#1[#2]}%
5350   }%
5351   \Hy@tempa
5352 }
5353 \def\@hyperref{\hyper@normalise\@hyperref}
5354 \def\@hyperref#1#2#3{%
5355   \edef\ref@one{\ifx\#2\#2\else#2.\fi#3}%
5356   \expandafter\tryhyper@link\ref@one\{#1}%
5357 }
5358 \def\tryhyper@link#1\#2{%
5359   \hyper@@link{#2}{#1}%
5360 }
5361 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5362 \def\@hyperdef#1#2#3{%, category, name, text
5363   \ifx\#1\%
5364     \def\Hy@AnchorName{#2}%
5365   \else
5366     \def\Hy@AnchorName{#1.#2}%
5367   \fi
5368   \ifHy@nesting
5369     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5370   \else
5371     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5372   \fi
5373 }

```

We also have a need to give a \LaTeX *label* to a hyper reference, to ease the pain of referring to it later. `\hyperrefundefinedlink` may be redefined by a user to add colour or other formatting.

```

5374 \let\hyperrefundefinedlink\@firstofone
5375 \def\label@hyperref[#1]{%
5376   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5377 }%
5378 \def\label@@hyperref#1#2#3{%
5379   \ifx#1\relax
5380     \protect\G@refundefinedtrue
5381     \@latex@warning{%

```

```

5382   Hyper reference `#2' on page \thepage \space undefined%
5383   }%
5384   \begingroup
5385     \hyperrefundefinedlink{#3}%
5386   \endgroup
5387 \else
5388   \hyper@@link{\expandafter\@fifthoffive#1}%
5389     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5390 \fi
5391 }
5392 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5393                               % anchor text
5394   \@bsphack
5395   \ifx\#2\%
5396     \def\Hy@AnchorName{#3}%
5397   \else
5398     \def\Hy@AnchorName{#2.#3}%
5399   \fi
5400   \if@filesw
5401     \protected@write\@auxout{}{%
5402       \string\newlabel{#1}{#3}{#4}{\Hy@AnchorName}}}%
5403   }%
5404 \fi
5405 \@esphack
5406 \ifHy@nesting
5407   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5408 \else
5409   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5410 \fi
5411 }

```

16.1 Link box support for XeTeX

```

5412 \newdimen\XeTeXLinkMargin
5413 \setlength{\XeTeXLinkMargin}{2pt}
5414 \ifxetex
5415   \font\XeTeXLink@font=pzdr at 1sp\relax
5416   \newcommand*\XeTeXLink@space{%
5417     \begingroup
5418       \XeTeXLink@font
5419       \@xxxii
5420     \endgroup
5421   }%
5422   \newcommand{\XeTeXLinkBox}[1]{%
5423     \begingroup
5424       \leavevmode
5425       \sbox\z@{#1}%
5426     \begingroup
5427       \dimen@=\dp\z@
5428       \advance\dimen@\XeTeXLinkMargin
5429       \setbox\tw@=\llap{%
5430         \hb@xt@\XeTeXLinkMargin{%
5431           \lower\dimen@\hbox{\XeTeXLink@space}%
5432         \hss
5433       }%
5434     }%
5435     \dp\tw@=\dp\z@

```

```

5436     \ht\tw@=\ht\z@
5437     \copy\tw@
5438 \endgroup
5439 \copy\z@
5440 \dimen@=\ht\z@
5441 \advance\dimen@\XeTeXLinkMargin
5442 \setbox\tw@=\rlap{%
5443   \hb@xt@\XeTeXLinkMargin{%
5444     \hss
5445     \raise\dimen@\hbox{\XeTeXLink@space}%
5446   }%
5447 }%
5448 \dp\tw@=\dp\z@
5449 \ht\tw@=\ht\z@
5450 \copy\tw@
5451 \endgroup
5452 }%
5453 \else
5454 \newcommand*{\XeTeXLinkBox}[1]{%
5455   \begingroup
5456     \leavevmode
5457     \sbox\z@{#1}%
5458     \copy\z@
5459   \endgroup
5460 }%
5461 \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.

```

5462 \def\hyper@link{\let\Hy@reserved@a\relax
5463   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5464 }
5465 % #1: type
5466 % #2: URL
5467 % #3: destination name
5468 % #4: text
5469 \def\hyper@link@[#1]#2#3#4{%
5470   \ltx@ifempty{#4}{% link text
5471     \Hy@Warning{Suppressing empty link}%
5472   }{%
5473     \begingroup
5474       \protected@edef\Hy@tempa{#2}%
5475       \edef\Hy@tempb{#3}%
5476       \ifx\Hy@tempa\ltx@empty
5477         \ifx\Hy@tempb\ltx@empty
5478           \Hy@Warning{Suppressing link with empty target}%
5479         \toks@{%
5480           \endgroup
5481           \ltx@secondoftwo
5482         }%
5483       \else
5484         \toks@{%
5485           \endgroup

```



```

5486      \hyper@link{#1}%
5487    }%
5488  \fi
5489  \else
5490    \toks@{%
5491      \endgroup
5492      \expandafter\hyper@readexternallink#2\{#1}%
5493    }%
5494  \fi
5495  \Hy@safe@activesfalse
5496  \toks@\expandafter{%
5497    \the\expandafter\toks@
5498    \expandafter{\Hy@tempb}{#4}%
5499  }%
5500  \the\toks@
5501 }%
5502 }

```

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.

```

5503 \def\hyper@readexternallink#1\{#2#3#4{%
5504   \begingroup
5505     \let\\\relax
5506   \expandafter\endgroup
5507   \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5508 }
5509 \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.

```

5510   \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5511 }

```

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

```

5512 \def\@pdftempwordfile{file}%
5513 \def\@pdftempwordrun{run}%
5514 \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:

```

5515   \ifx\{#6\%
5516     \@hyper@linkfile file:#7\{#3}{#2}{#7}%

```

```

5517 \else
5518 \ifx\\#4\\%
5519 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5520 \else

```

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

```

5521 \def\@pdftempa{#4}%
5522 \ifx\@pdftempa\@pdftempwordfile
5523 \@hyper@linkfile#7\\{#3}{#2}{#7}%
5524 \else

```

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

```

5525 \ifx\@pdftempa\@pdftempwordrun
5526 \ifHy@pdfa
5527 \Hy@Error{%
5528 PDF/A: Launch action is prohibited%
5529 }\@ehc
5530 \begingroup
5531 \leavevmode
5532 #2%
5533 \endgroup
5534 \else
5535 \@hyper@launch#7\\{#3}{#2}%
5536 \fi
5537 \else

```

otherwise its a URL

```

5538 \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5539 \fi
5540 \fi
5541 \fi
5542 \fi
5543 }

```

By default, turn run: into file:

```

5544 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5545 \hyper@linkurl{#2}{%
5546 \Hy@linkfileprefix
5547 #1%
5548 \ifx\\#3\\%
5549 \else
5550 \hyper@hash
5551 #3%
5552 \fi
5553 }%
5554 }

```

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

```

5555 \def\@hyper@linkfile file:#1\\#2#3#4{%
5556 %file url,link string, name, original uri
5557 \filename@parse{#1}%
5558 \ifx\filename@ext\relax
5559 \edef\filename@ext{\XR@ext}%
5560 \fi
5561 \def\use@file{\filename@area\filename@base.\filename@ext}%
5562 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5563 \hyper@linkfile{#2}{\use@file}{#3}%
5564 }{%

```

```

5565 \ifx\@baseurl\@empty
5566 \hyper@linkurl{#2}{%
5567 #4\ifx\#3\else\hyper@hash#3\fi
5568 }%
5569 \else
5570 \hyper@linkurl{#2}{\use@file\ifx\#3\else\hyper@hash#3\fi}%
5571 \fi
5572 }%
5573 }

5574 \def\Hy@IfStringEndsWith#1#2{%
5575 \begingroup
5576 \edef\x{#1}%
5577 \@onelevel@sanitize\x
5578 \edef\x{.x$}%
5579 \edef\y{#2}%
5580 \@onelevel@sanitize\y
5581 \edef\y{.y$}%
5582 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5583 \endgroup
5584 \ifx\relax##2\relax
5585 \expandafter\ltx@secondoftwo
5586 \else
5587 \expandafter\ltx@firstoftwo
5588 \fi
5589 }%
5590 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5591 }

5592 \def\Hy@StringLocalhost{localhost}
5593 \@onelevel@sanitize\Hy@StringLocalhost
5594 \def\Hy@CleanupFile#1{%
5595 \edef#1{#1}%
5596 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5597 }
5598 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5599 \begingroup
5600 \toks@{\endgroup}%
5601 \def\x{#1}%
5602 \ifx\x\@empty
5603 \def\x{#2}%
5604 \ifx\x\@empty
5605 \toks@{\endgroup\def#5{/#3}}%
5606 \else
5607 \@onelevel@sanitize\x
5608 \ifx\x\Hy@StringLocalhost
5609 \toks@{\endgroup\def#5{/#3}}%
5610 \fi
5611 \fi
5612 \fi
5613 \the\toks@
5614 }

```

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.

```

5615 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5616 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5617   \ifx\#1\%
5618     #2\Hy@Warning{Ignoring empty anchor}%
5619   \else
5620     \def\anchor@spot{#2#3}%
5621     \let\put@me@back\@empty
5622     \ifx\relax#2\relax
5623       \else
5624         \ifHy@nesting
5625         \else
5626           \ifcat a\noexpand#2\relax
5627           \else
5628             \ifcat 0\noexpand#2 \relax
5629             \else
5630 %           \typeout{Anchor start is not alphanumeric %
5631 %             on input line\the\inputlineno%
5632 %           }%
5633           \let\anchor@spot\@empty
5634           \def\put@me@back{#2#3}%
5635         \fi
5636       \fi
5637     \fi
5638   \fi
5639   \ifHy@activeanchor
5640     \anchor@spot
5641   \else
5642     \hyper@anchor{#1}%
5643   \fi
5644   \expandafter\put@me@back
5645 \fi
5646 \let\anchor@spot\@empty
5647 }
5648 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5649 \ifHy@destlabel

```

```

\hyper@newdestlabel

```

```

5650 \def\hyper@newdestlabel#1#2{%
5651   \begingroup
5652   \Hy@safe@activetrue
5653   \edef\x{\endgroup
5654     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5655   }%
5656   \x
5657 }%

```

```

\hyper@destlabel@hook

```

```

5658 \providecommand*\hyper@destlabel@hook{}%

```

```

\Hy@DestRename

```

```

5659 \newcommand*\Hy@DestRename[2]{%
5660   \ltx@ifundefined{HyDL!#1}{%

```

```

5661 \begingroup
5662 \Hy@safe@activetrue
5663 \edef\dest@name{#1}%
5664 \edef\label@name{#2}%
5665 \hyper@destlabel@hook
5666 \Hy@IsNotEmpty{dest@name}{%
5667 \Hy@IsNotEmpty{label@name}{%
5668 \global\expandafter
5669 \let\csname HyDL!#1\endcsname\ltx@empty
5670 \if@files
5671 \protected@write\@auxout{}{%
5672 \string\hyper@newdestlabel
5673 {#1}%
5674 {\label@name}%
5675 }%
5676 \fi
5677 }%
5678 }%
5679 \endgroup
5680 }{}%
5681 }%

```

\HyperDestRename

```

5682 \newcommand*{\HyperDestRename}[2]{%
5683 \AtBeginDocument{%
5684 \Hy@DestRename{#1}{#2}%
5685 }%
5686 }%
5687 \AtBeginDocument{%
5688 \let\HyperDestRename\Hy@DestRename
5689 }%

```

\Hy@IsNotEmpty

```

5690 \def\Hy@IsNotEmpty#1{%
5691 \ltx@ifundefined{#1}\ltx@gobble{%
5692 \expandafter\ifx\csname#1\endcsname\ltx@empty
5693 \expandafter\ltx@gobble
5694 \else
5695 \expandafter\ltx@firstofone
5696 \fi
5697 }%
5698 }%

5699 \ltx@GlobalAppendToMacro\label@hook{%
5700 \HyperDestRename\@currentHref\label@name
5701 }%

```

\HyperDestLabelReplace

```

5702 \def\HyperDestLabelReplace#1{%
5703 \ltx@ifundefined{HyDL@#1}{%
5704 #1%
5705 }{%
5706 \csname HyDL@#1\endcsname
5707 }%
5708 }%

```

\HyperDestNameFilter

```

5709 \let\HyperDestNameFilter\HyperDestLabelReplace

```

```

5710 \else

\hyper@newdestlabel

5711 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace

5712 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename

@gobbletwo

5713 \fi

5714 \Hy@DisableOption{destlabel}

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

5715 \AddLineBeginAux{%
5716 \string\providecommand\string\hyper@newdestlabel[2]{}%
5717 }

```

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.

```

5718 \let\htmladdimg\hyperimage

5719 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5720 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5721 \def\htmlref#1#2{% anchor text, label
5722 \label@hyperref{#2}{#1}%
5723 }

```

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.

```

5724 \def\@latex2htmlX{%
5725 \let\hhyperref\hyperref
5726 \def\hyperref##1##2##3##4{% anchor text for HTML
5727 % text to print before label in print
5728 % label
5729 % post-label text in print
5730 ##2\ref{##4}##3%
5731 }%
5732 }

```

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.

```
5733 \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

```
5734 \def\HyField@NewFlag#1#2{%
5735   \lowercase{\HyField@NewOption{#2}}%
5736   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5737 }
```

\HyField@NewFlagOnly

```
5738 \def\HyField@NewFlagOnly#1#2{%
5739   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5740 }
```

\HyField@NewOption #1: option name

```
5741 \def\HyField@NewOption#1{%
5742   \expandafter\newif\csname ifFld@#1\endcsname
5743   \define@key{Field}{#1}[true]{%
5744     \lowercase{\Field@boolkey{##1}}{#1}%
5745   }%
5746 }
```

\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

```
5747 \def\HyField@NewBitsetFlag#1#2#3#4{%
5748   \begingroup
5749   \count@=#4\relax
5750   \advance\count@\m@ne
5751   \def\x##1{%
5752     \endgroup
5753     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5754     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5755       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5756         (\number#4) #2%
5757       }%
5758     \else
5759       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5760         \csname HyField@#3@##1\endcsname
5761         /#2%
5762       }%
5763     \fi
5764   }%
5765   \expandafter\x\expandafter{\the\count@}%
5766 }
```

```

\HyField@UseFlag The bit set is HyField@#1
5767 \def\HyField@UseFlag#1#2{%
5768   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5769 }

\HyField@@UseFlag
5770 \def\HyField@@UseFlag#1#2{%
5771   \bitsetSetValue{HyField@#2}{%
5772     \csname HyField@#2@#1\endcsname
5773   }{%
5774     \csname ifFld@#1\endcsname 1\else 0\fi
5775   }%
5776 }

\HyField@SetFlag The bit set is HyField@#1
5777 \def\HyField@SetFlag#1#2{%
5778   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5779 }

\HyField@@SetFlag
5780 \def\HyField@@SetFlag#1#2{%
5781   \bitsetSetValue{HyField@#2}{%
5782     \csname HyField@#2@#1\endcsname
5783   }{1}%
5784 }

\HyField@PrintFlags
5785 \def\HyField@PrintFlags#1#2{%
5786   \ifHy@verbose
5787     \begingroup
5788     \let\Hy@temp\@empty
5789     \let\MessageBreak\relax
5790     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5791     \bitsetGetSetBitList{HyField@#1}\do{%
5792       \edef\Hy@temp{%
5793         \Hy@temp
5794         \csname HyField@#1@\x\endcsname\MessageBreak
5795       }%
5796     }%
5797   \edef\x{\endgroup
5798     \noexpand\Hy@Info{%
5799       Field flags: %
5800       \expandafter\ifx\@car#1\@nil S\else/\fi
5801       #1 %
5802       \bitsetGetDec{HyField@#1} %
5803       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5804       \Hy@temp
5805       for #2%
5806     }%
5807   }\x
5808 \fi
5809 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”


```

5810 \HyField@NewFlag{Ff}{ReadOnly}{1}
5811 \HyField@NewFlag{Ff}{Required}{2}
5812 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5813 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5814 \HyField@NewFlag{Ff}{Radio}{16}
5815 \HyField@NewFlag{Ff}{Pushbutton}{17}
5816 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5817 \HyField@NewFlag{Ff}{Multiline}{13}
5818 \HyField@NewFlag{Ff}{Password}{14}
5819 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5820 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5821 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5822 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5823 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5824 \HyField@NewFlag{Ff}{Combo}{18}
5825 \HyField@NewFlag{Ff}{Edit}{19}
5826 \HyField@NewFlag{Ff}{Sort}{20}
5827 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5828 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5829 \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.

```

5830 \newif\ifFld@popdown
5831 \define@key{Field}{popdown}[true]{%
5832   \lowercase{\Field@boolkey{#1}}{popdown}%
5833 }

```

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.

```

5834 \HyField@NewFlag{F}{Invisible}{1}
5835 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5836 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5837 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5838 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5839 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5840 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5841 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5842 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5843 \ifHy@pdfa
5844   \def\HyField@PDFAFldWarning#1#2{%
5845     \Hy@Warning{%
5846       PDF/A: Annotation flag `#1' must\MessageBreak
5847       be set to `#2'%
5848     }%
5849   }%
5850   \Fld@invisiblefalse
5851   \def\Fld@invisibletrue{%

```

```

5852 \HyField@PDFAFFlagWarning{invisible}{false}%
5853 }%
5854 \Fld@hiddenfalse
5855 \def\Fld@hiddentrue{%
5856 \HyField@PDFAFFlagWarning{hidden}{false}%
5857 }%
5858 \Fld@printtrue
5859 \def\Fld@printfalse{%
5860 \HyField@PDFAFFlagWarning{print}{true}%
5861 }%
5862 \Fld@nozoomtrue
5863 \def\Fld@nozoomfalse{%
5864 \HyField@PDFAFFlagWarning{nozoom}{true}%
5865 }%
5866 \Fld@norotatetrue
5867 \def\Fld@norotatefalse{%
5868 \HyField@PDFAFFlagWarning{norotate}{true}%
5869 }%
5870 \Fld@noviewfalse
5871 \def\Fld@noviewtrue{%
5872 \HyField@PDFAFFlagWarning{noview}{false}%
5873 }%
5874 \fi

```

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

```

5875 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5876 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5877 \HyField@NewFlag{Submit}{GetMethod}{4}
5878 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5879 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5880 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5881 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5882 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5883 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5884 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5885 \HyField@NewFlag{Submit}{ExclFKey}{12}
5886 \HyField@NewFlag{Submit}{EmbedForm}{14}

5887 \define@key{Field}{export}{%
5888 \lowercase{\def\Hy@temp{#1}}%
5889 \@ifundefined{Fld@export@\Hy@temp}{%
5890 \@onelevel@sanitize\Hy@temp
5891 \Hy@Error{%
5892 Unknown export format `\'Hy@temp'.\MessageBreak
5893 Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5894 }\@ehc
5895 }{%
5896 \let\Fld@export\Hy@temp
5897 }%
5898 }
5899 \def\Fld@export{fdf}
5900 \@namedef{Fld@export@fdf}{0}%
5901 \@namedef{Fld@export@html}{1}%
5902 \@namedef{Fld@export@xfdf}{2}%
5903 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```
5904 \def\HyField@FlagsSubmit{%
5905   \bitsetReset{HyField@Submit}%
5906   \ifcase\@nameuse{Fld@export@\Fld@export} %
5907     % FDF
5908     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5909     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5910     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5911     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5912     \HyField@UseFlag{Submit}{CanonicalFormat}%
5913     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5914     \HyField@UseFlag{Submit}{ExclFKey}%
5915     \HyField@UseFlag{Submit}{EmbedForm}%
5916   \or % HTML
5917     \HyField@SetFlag{Submit}{ExportFormat}%
5918     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5919     \HyField@UseFlag{Submit}{GetMethod}%
5920     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5921     \HyField@UseFlag{Submit}{CanonicalFormat}%
5922   \or % XFDF
5923     \HyField@SetFlag{Submit}{XFDF}%
5924     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5925     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5926     \HyField@UseFlag{Submit}{CanonicalFormat}%
5927   \or % PDF
5928     \HyField@SetFlag{Submit}{SubmitPDF}%
5929     \HyField@UseFlag{Submit}{GetMethod}%
5930   \fi
5931   \HyField@PrintFlags{Submit}{submit button field}%
5932   \bitsetIsEmpty{HyField@Submit}{%
5933     \let\Fld@submitflags\ltx@empty
5934   }{%
5935     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5936   }%
5937 }
```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
5938 \def\HyField@FlagsAnnot#1{%
5939   \bitsetReset{HyField@F}%
5940   \HyField@UseFlag{F}{Invisible}%
5941   \HyField@UseFlag{F}{Hidden}%
5942   \HyField@UseFlag{F}{Print}%
5943   \HyField@UseFlag{F}{NoZoom}%
5944   \HyField@UseFlag{F}{NoRotate}%
5945   \HyField@UseFlag{F}{NoView}%
5946   \HyField@UseFlag{F}{Locked}%
5947   \HyField@UseFlag{F}{ToggleNoView}%
5948   \HyField@UseFlag{F}{LockedContents}%
5949   \HyField@PrintFlags{F}{#1}%
5950   \bitsetIsEmpty{HyField@F}{%
5951     \let\Fld@annotflags\ltx@empty
5952   }{%
5953     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5954   }%
5955 }
```

```

5954 }%
5955 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5956 \def\HyField@FlagsPushButton{%
5957   \HyField@FlagsAnnot{push button field}%
5958   \bitsetReset{HyField@Ff}%
5959   \HyField@UseFlag{Ff}{ReadOnly}%
5960   \HyField@UseFlag{Ff}{Required}%
5961   \HyField@UseFlag{Ff}{NoExport}%
5962   \HyField@SetFlag{Ff}{PushButton}%
5963   \HyField@PrintFlags{Ff}{push button field}%
5964   \bitsetIsEmpty{HyField@Ff}{%
5965     \let\Fld@flags\ltx@empty
5966   }{%
5967     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5968   }%
5969 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5970 \def\HyField@FlagsCheckBox{%
5971   \HyField@FlagsAnnot{check box field}%
5972   \bitsetReset{HyField@Ff}%
5973   \HyField@UseFlag{Ff}{ReadOnly}%
5974   \HyField@UseFlag{Ff}{Required}%
5975   \HyField@UseFlag{Ff}{NoExport}%
5976   \HyField@PrintFlags{Ff}{check box field}%
5977   \bitsetIsEmpty{HyField@Ff}{%
5978     \let\Fld@flags\ltx@empty
5979   }{%
5980     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5981   }%
5982 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5983 \def\HyField@FlagsRadioButton{%
5984   \HyField@FlagsAnnot{radio button field}%
5985   \bitsetReset{HyField@Ff}%
5986   \HyField@UseFlag{Ff}{ReadOnly}%
5987   \HyField@UseFlag{Ff}{Required}%
5988   \HyField@UseFlag{Ff}{NoExport}%
5989   \HyField@UseFlag{Ff}{NoToggleToOff}%
5990   \HyField@SetFlag{Ff}{Radio}%
5991   \HyField@UseFlag{Ff}{RadiosInUnison}%
5992   \HyField@PrintFlags{Ff}{radio button field}%
5993   \bitsetIsEmpty{HyField@Ff}{%
5994     \let\Fld@flags\ltx@empty
5995   }{%
5996     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5997   }%
5998 }

```

20.1.7 Text fields

\HyField@FlagsText

```
5999 \def\HyField@FlagsText{%
6000   \HyField@FlagsAnnot{text field}%
6001   \bitsetReset{HyField@Ff}%
6002   \HyField@UseFlag{Ff}{ReadOnly}%
6003   \HyField@UseFlag{Ff}{Required}%
6004   \HyField@UseFlag{Ff}{NoExport}%
6005   \HyField@UseFlag{Ff}{Multiline}%
6006   \HyField@UseFlag{Ff}{Password}%
6007   \HyField@UseFlag{Ff}{FileSelect}%
6008   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6009   \HyField@UseFlag{Ff}{DoNotScroll}%
6010   \ifFld@comb
6011     \ifcase0\ifFld@multiline
6012       \else\ifFld@password
6013       \else\ifFld@fileselect
6014       \else 1\fi\fi\fi\relax
6015     \Hy@Error{%
6016       Field option `comb' cannot used together with\MessageBreak
6017       `multiline', `password', or `fileselect'%
6018     }\@ehc
6019   \else
6020     \HyField@UseFlag{Ff}{Comb}%
6021   \fi
6022 \fi
6023 \HyField@UseFlag{Ff}{RichText}%
6024 \HyField@PrintFlags{Ff}{text field}%
6025 \bitsetIsEmpty{HyField@Ff}{%
6026   \let\Fld@flags\ltx@empty
6027 }{%
6028   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6029 }%
6030 }
```

20.1.8 Choice fields

\HyField@FlagsChoice

```
6031 \def\HyField@FlagsChoice{%
6032   \HyField@FlagsAnnot{choice field}%
6033   \bitsetReset{HyField@Ff}%
6034   \HyField@UseFlag{Ff}{ReadOnly}%
6035   \HyField@UseFlag{Ff}{Required}%
6036   \HyField@UseFlag{Ff}{NoExport}%
6037   \HyField@UseFlag{Ff}{Combo}%
6038   \ifFld@combo
6039     \HyField@UseFlag{Ff}{Edit}%
6040   \fi
6041   \HyField@UseFlag{Ff}{Sort}%
6042   \HyField@UseFlag{Ff}{MultiSelect}%
6043   \ifFld@combo
6044     \ifFld@edit
6045       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6046     \fi
6047   \fi
6048   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

6049 \HyField@PrintFlags{Ff}{choice field}%
6050 \bitsetIsEmpty{HyField@Ff}{%
6051   \let\Fld@flags\ltx@empty
6052 }{%
6053   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6054 }%
6055 }

```

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`.

```

6056 \def\HyField@PDFChoices#1{%
6057   \begingroup
6058   \global\let\Fld@choices\ltx@empty
6059   \let\HyTmp@optlist\ltx@empty
6060   \let\HyTmp@optitem\relax
6061   \count@=0 %
6062   \kv@parse{#1}{%
6063     \Hy@pdfstringdef\kv@key\kv@key
6064     \ifx\kv@value\relax
6065       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6066         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6067       \else
6068         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6069       \fi
6070     \else
6071       \Hy@pdfstringdef\kv@value\kv@value
6072       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
6073     \fi
6074     \edef\HyTmp@optlist{%
6075       \HyTmp@optlist
6076       \HyTmp@optitem{\the\count@}{\kv@key}0%
6077     }%
6078     \advance\count@ by 1 %
6079     \@gobbletwo
6080   }%
6081   \xdef\Fld@choices{/Opt[\Fld@choices]}%
6082   \ifFld@multiselect
6083     \HyField@@PDFChoices{DV}\Fld@default
6084     \HyField@@PDFChoices{V}\Fld@value
6085   \else
6086     \ifx\Fld@default\relax
6087     \else
6088       \pdfstringdef\Hy@gtemp\Fld@default
6089       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6090     \fi
6091     \ifx\Fld@value\relax
6092     \else
6093       \pdfstringdef\Hy@gtemp\Fld@value
6094       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6095     \fi
6096   \fi
6097   \endgroup
6098 }

```

\HyField@@PDFChoices

```
6099 \def\HyField@@PDFChoices#1#2{%
6100   \ifx#2\relax
6101   \else
6102     \count@=0 %
6103     \def\HyTmp@optitem##1##2##3{%
6104       \def\HyTmp@key{##2}%
6105       \ifx\HyTmp@key\Hy@gtemp
6106         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6107           \HyTmp@optlist
6108           \HyTmp@optitem{##1}{##2}1%
6109         }%
6110         \let\HyTmp@found=Y%
6111       \else
6112         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6113           \HyTmp@optlist
6114           \HyTmp@optitem{##1}{##2}##3%
6115         }%
6116       \fi
6117     }%
6118     \expandafter\comma@parse\expandafter{#2}{%
6119       \pdfstringdef\Hy@gtemp\comma@entry
6120       \let\HyTmp@found=N %
6121       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6122       \HyTmp@optlist
6123       \ifx\HyTmp@found Y%
6124         \advance\count@ by 1 %
6125       \else
6126         \@onelevel@sanitize\comma@entry
6127         \PackageWarning{hyperref}{%
6128           \string\ChoiceBox: Ignoring value `\'comma@entry',%
6129           \MessageBreak
6130           it cannot be found in the choices%
6131         }%
6132       \fi
6133       \@gobble
6134     }%
6135     \def\HyTmp@optitem##1##2##3{%
6136       \ifnum##3=1 %
6137         (##2)%
6138       \fi
6139     }%
6140     \ifcase\count@
6141     \or
6142       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6143     \else
6144       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6145       \ifx#1V%
6146         \def\HyTmp@optitem##1##2##3{%
6147           \ifnum##3=1 %
6148             \@firstofone{ ##1}%
6149           \fi
6150         }%
6151       \edef\HyTmp@optlist{\HyTmp@optlist}%
6152       \xdef\Fld@choices{%
6153         \Fld@choices
6154         /I[\expandafter\@firstofone\HyTmp@optlist]%

```

```

6155     }%
6156     \fi
6157     \fi
6158     \fi
6159 }

```

20.3 Forms

\HyField@SetKeys

```

6160 \def\HyField@SetKeys{%
6161   \kvsetkeys{Field}%
6162 }

6163 \newif\ifFld@checked
6164 \newif\ifFld@disabled
6165 \Fld@checkedfalse
6166 \Fld@disabledfalse
6167 \newcount\Fld@menulength
6168 \newdimen\Fld@Width
6169 \newdimen\Fld@charsize
6170 \Fld@charsize=10\p@
6171 \def\Fld@maxlen{0}
6172 \def\Fld@align{0}
6173 \def\Fld@color{0 0 0 rg}
6174 \def\Fld@bcolor{1 1 1}
6175 \def\Fld@bordercolor{1 0 0}
6176 \def\Fld@bordersep{1\p@}
6177 \def\Fld@borderwidth{1}
6178 \def\Fld@borderstyle{S}
6179 \def\Fld@cbsymbol{4}
6180 \def\Fld@radiosymbol{H}
6181 \def\Fld@rotation{0}
6182 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
6183 \def\endForm{\@endForm}
6184 \newif\ifForm@html
6185 \Form@htmlfalse
6186 \def\Form@boolkey#1#2{%
6187   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6188 }
6189 \define@key{Form}{action}{%
6190   \hyper@normalise\Hy@DefFormAction{#1}%
6191 }
6192 \def\Hy@DefFormAction{\def\Form@action}
6193 \def\enc@html{html}
6194 \define@key{Form}{encoding}{%
6195   \def\Hy@tempa{#1}%
6196   \ifx\Hy@tempa\enc@html
6197     \Form@htmltrue
6198   \def\Fld@export{html}%
6199   \else
6200     \Hy@Warning{%
6201       Form `encoding' key with \MessageBreak
6202       unknown value `#1'%
6203     }%
6204     \Form@htmlfalse
6205   \fi
6206 }

```



```

6207 \define@key{Form}{method}{%
6208   \lowercase{\def\Hy@temp{#1}}%
6209   \@ifundefined{Form@method@\Hy@temp}{%
6210     \@onelevel@sanitize\Hy@temp
6211     \Hy@Error{%
6212       Unknown method `'\Hy@temp'.\MessageBreak
6213       Known values are `post' and `get'%
6214     }\@ehc
6215   }{%
6216     \let\Form@method\Hy@temp
6217     \ifcase\@nameuse{Form@method@\Hy@temp} %
6218       \Fld@getmethodfalse
6219     \else
6220       \Fld@getmethodtrue
6221     \fi
6222   }%
6223 }
6224 \def\Form@method{%
6225   \@namedef{Form@method@post}{0}
6226   \@namedef{Form@method@get}{1}

6227 \newif\ifHyField@NeedAppearances
6228 \def\HyField@NeedAppearancesfalse{%
6229   \global\let\ifHyField@NeedAppearances\iffalse
6230 }
6231 \def\HyField@NeedAppearancetrue{%
6232   \global\let\ifHyField@NeedAppearances\iftrue
6233 }
6234 \HyField@NeedAppearancetrue
6235 \define@key{Form}{NeedAppearances}[true]{%
6236   \edef\Hy@tempa{#1}%
6237   \ifx\Hy@tempa\Hy@true
6238     \HyField@NeedAppearancetrue
6239   \else
6240     \ifx\Hy@tempa\Hy@false
6241       \HyField@NeedAppearancesfalse
6242     \else
6243       \Hy@Error{%
6244         Unexpected value `'\Hy@tempa'\MessageBreak
6245         of option `NeedAppearances' instead of\MessageBreak
6246         `true' or `false'%
6247       }\@ehc
6248     \fi
6249   \fi
6250 }
6251 \def\Field@boolkey#1#2{%
6252   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6253 }
6254 \ifHy@texht
6255   \newtoks\Field@toks
6256   \Field@toks={ }%
6257   \def\Field@addtoks#1#2{%
6258     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6259     \@processme
6260   }%
6261 \else
6262   \def\Hy@WarnHTMLFieldOption#1{%
6263     \Hy@Warning{%

```

```

6264     HTML field option `#1'\MessageBreak
6265     is ignored%
6266 }%
6267 }%
6268 \fi
6269 \def\Fld@checkequals#1=#2=#3\\{%
6270   \def\@currDisplay{#1}%
6271   \ifx\\#2\\%
6272     \def\@currValue{#1}%
6273   \else
6274     \def\@currValue{#2}%
6275   \fi
6276   \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
6277 }
6278 \define@key{Field}{loc}{%
6279   \def\Fld@loc{#1}%
6280 }
6281 \define@key{Field}{checked}[true]{%
6282   \lowercase{\Field@boolkey{#1}}{checked}%
6283 }
6284 \define@key{Field}{disabled}[true]{%
6285   \lowercase{\Field@boolkey{#1}}{disabled}%
6286 }
6287 \ifHy@texht
6288   \define@key{Field}{accesskey}{%
6289     \Field@addtoks{accesskey}{#1}%
6290   }%
6291   \define@key{Field}{tabkey}{%
6292     \Field@addtoks{tabkey}{#1}%
6293   }%
6294 \else
6295   \define@key{Field}{accesskey}{%
6296     \Hy@WarnHTMLFieldOption{accesskey}%
6297   }%
6298   \define@key{Field}{tabkey}{%
6299     \Hy@WarnHTMLFieldOption{tabkey}%
6300   }%
6301 \fi
6302 \define@key{Field}{name}{%
6303   \def\Fld@name{#1}%
6304 }
6305 \let\Fld@altname\relax
6306 \define@key{Field}{altname}{%
6307   \def\Fld@altname{#1}%
6308 }
6309 \let\Fld@mappingname\relax
6310 \define@key{Field}{mappingname}{%
6311   \def\Fld@mappingname{#1}%
6312 }
6313 \define@key{Field}{width}{%
6314   \def\Fld@width{#1}%
6315   \Field@Width#1\setbox0=\hbox{m}%
6316 }
6317 \define@key{Field}{maxlen}{%
6318   \def\Fld@maxlen{#1}%
6319 }
6320 \define@key{Field}{menulength}{%

```

```

6321 \Fld@menulength=#1\relax
6322 }
6323 \define@key{Field}{height}{%
6324 \def\Fld@height{#1}%
6325 }
6326 \define@key{Field}{charsize}{%
6327 \setlength{\Fld@charsize}{#1}%
6328 }
6329 \define@key{Field}{borderwidth}{%
6330 \Hy@defaultbp\Fld@borderwidth{#1}%
6331 }
6332 \def\Hy@defaultbp#1#2{%
6333 \begingroup
6334 \afterassignment\Hy@defaultbpAux
6335 \dimen@=#2bp\relax{#1}{#2}%
6336 }
6337 \begingroup\expandafter\expandafter\expandafter\endgroup
6338 \expandafter\ifx\csname dimexpr\endcsname\relax
6339 \def\Hy@defaultbpAux#1\relax#2#3{%
6340 \ifx!#1!%
6341 \endgroup
6342 \def#2{#3}%
6343 \else
6344 \dimen@=.99626\dimen@
6345 \edef\x{\endgroup
6346 \def\noexpand#2{%
6347 \strip@pt\dimen@
6348 }%
6349 }\x
6350 \fi
6351 }%
6352 \else
6353 \def\Hy@defaultbpAux#1\relax#2#3{%
6354 \ifx!#1!%
6355 \endgroup
6356 \def#2{#3}%
6357 \else
6358 \edef\x{\endgroup
6359 \def\noexpand#2{%
6360 \strip@pt\dimexpr\dimen@*800/803\relax
6361 }%
6362 }\x
6363 \fi
6364 }%
6365 \fi
6366 \define@key{Field}{borderstyle}{%
6367 \let\Hy@temp\Fld@borderstyle
6368 \def\Fld@borderstyle{#1}%
6369 \Hy@Match\Fld@borderstyle{}{%
6370 ^[SDBIU]$%
6371 }{}{%
6372 \Hy@Warning{%
6373 Invalid value `@pdfborderstyle'\MessageBreak
6374 for option `pdfborderstyle'. Valid values:\MessageBreak
6375 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6376 \space\space I (Inset), U (Underline)\MessageBreak
6377 Option setting is ignored%

```

```

6378 }%
6379 \let\Fld@borderstyle\Hy@temp
6380 }%
6381 }
6382 \define@key{Field}{bordersep}{%
6383 \def\Fld@bordersep{#1}%
6384 }
6385 \define@key{Field}{default}{%
6386 \Hy@pdfstringdef\Fld@default{#1}%
6387 }
6388 \define@key{Field}{align}{%
6389 \def\Fld@align{#1}%
6390 }
6391 \define@key{Field}{value}{%
6392 \Hy@pdfstringdef\Fld@value{#1}%
6393 }
6394 \define@key{Field}{checkboxsymbol}{%
6395 \Fld@DingDef\Fld@cbsymbol{#1}%
6396 }
6397 \define@key{Field}{radiosymbol}{%
6398 \Fld@DingDef\Fld@radiosymbol{#1}%
6399 }
6400 \def\Fld@DingDef#1#2{%
6401 \let\Fld@temp\ltx@empty
6402 \Fld@@@DingDef#2\ding{ }\@nil
6403 \let#1\Fld@temp
6404 }
6405 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6406 \expandafter\def\expandafter\Fld@temp\expandafter{%
6407 \Fld@temp
6408 #1%
6409 }%
6410 \ifx\#3\%
6411 \expandafter\@gobble
6412 \else
6413 \begingroup
6414 \lccode`0=#2\relax
6415 \lowercase{\endgroup
6416 \expandafter\def\expandafter\Fld@temp\expandafter{%
6417 \Fld@temp
6418 0%
6419 }%
6420 }%
6421 \expandafter\@firstofone
6422 \fi
6423 {%
6424 \Fld@@@DingDef#3\@nil
6425 }%
6426 }

6427 \define@key{Field}{rotation}{%
6428 \def\Fld@rotation{#1}%
6429 }

6430 \define@key{Field}{backgroundcolor}{%
6431 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6432 }
6433 \define@key{Field}{bordercolor}{%
6434 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%

```

```

6435 }
6436 \define@key{Field}{color}{%
6437   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6438 }

6439 \let\Fld@onclick@code\ltx@empty
6440 \let\Fld@format@code\ltx@empty
6441 \let\Fld@validate@code\ltx@empty
6442 \let\Fld@calculate@code\ltx@empty
6443 \let\Fld@keystroke@code\ltx@empty
6444 \let\Fld@onfocus@code\ltx@empty
6445 \let\Fld@onblur@code\ltx@empty
6446 \let\Fld@onmousedown@code\ltx@empty
6447 \let\Fld@onmouseup@code\ltx@empty
6448 \let\Fld@onenter@code\ltx@empty
6449 \let\Fld@onexit@code\ltx@empty
6450 \def\Hy@temp#1{%
6451   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6452 }
6453 \def\Hy@@temp#1#2{%
6454   \ifHy@pdfa
6455     \define@key{Field}{#2}{%
6456       \Hy@Error{%
6457         PDF/A: Additional action `#2' is prohibited%
6458       }\@ehc
6459     }%
6460   \else
6461     \define@key{Field}{#2}{%
6462       \def#1{##1}%
6463     }%
6464   \fi
6465 }
6466 \Hy@temp{keystroke}
6467 \Hy@temp{format}
6468 \Hy@temp{validate}
6469 \Hy@temp{calculate}
6470 \Hy@temp{onfocus}
6471 \Hy@temp{onblur}
6472 \Hy@temp{onenter}
6473 \Hy@temp{onexit}

6474 \let\Fld@calculate@sortkey\ltx@empty
6475 \define@key{Field}{calculatesortkey}[1]{%
6476   \def\Fld@calculate@sortkey{#1}%
6477 }

6478 \ifHy@texht
6479   \def\Hy@temp#1{%
6480     \define@key{Field}{#1}{%
6481       \Field@addtoks{#1}{##1}%
6482     }%
6483   }%
6484   \else
6485     \def\Hy@temp#1{%
6486       \define@key{Field}{#1}{%
6487         \Hy@WarnHTMLFieldOption{#1}%
6488       }%
6489     }%
6490   \fi

```

```

6491 \Hy@temp{ondblclick}
6492 \Hy@temp{onmousedown}
6493 \Hy@temp{onmouseup}
6494 \Hy@temp{onmouseover}
6495 \Hy@temp{onmousemove}
6496 \Hy@temp{onmouseout}
6497 \Hy@temp{onkeydown}
6498 \Hy@temp{onkeyup}
6499 \Hy@temp{onselect}
6500 \Hy@temp{onchange}
6501 \Hy@temp{onkeypress}
6502 \ifHy@texht
6503   \define@key{Field}{onclick}{%
6504     \Field@addtoks{onclick}{#1}%
6505   }%
6506 \else
6507   \ifHy@pdfa
6508     \define@key{Field}{onclick}{%
6509       \Hy@Error{%
6510         PDF/A: Action `onclick' is prohibited%
6511       } \@ehc
6512     }%
6513   \else
6514     \define@key{Field}{onclick}{%
6515       \def\Fld@onclick@code{#1}%
6516     }%
6517   \fi
6518 \fi

6519 \DeclareRobustCommand\TextField{%
6520   \@ifnextchar[{\@TextField}{\@TextField[]}%
6521 }
6522 \DeclareRobustCommand\ChoiceMenu{%
6523   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6524 }
6525 \DeclareRobustCommand\CheckBox{%
6526   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6527 }
6528 \DeclareRobustCommand\PushButton{%
6529   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6530 }
6531 \DeclareRobustCommand\Gauge{%
6532   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6533 }
6534 \DeclareRobustCommand\Submit{%
6535   \@ifnextchar[{\@Submit}{\@Submit[]}%
6536 }
6537 \DeclareRobustCommand\Reset{%
6538   \@ifnextchar[{\@Reset}{\@Reset[]}%
6539 }
6540 \def\LayoutTextField#1#2{% label, field
6541   \def\Hy@temp{#1}%
6542   \ifx\Hy@temp\@empty
6543     #2%
6544   \else
6545     #1 #2%
6546   \fi
6547 }

```

```

6548 \def\LayoutChoiceField#1#2{% label, field
6549   \def\Hy@temp{#1}%
6550   \ifx\Hy@temp\@empty
6551     #2%
6552   \else
6553     #1 #2%
6554   \fi
6555 }
6556 \def\LayoutCheckField#1#2{% label, field
6557   \def\Hy@temp{#1}%
6558   \ifx\Hy@temp\@empty
6559     #2%
6560   \else
6561     #1 #2%
6562   \fi
6563 }
6564 \def\LayoutPushButtonField#1{% button
6565   #1%
6566 }
6567 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6568 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6569 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6570 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6571 \def\MakeButtonField#1{%
6572   \sbox0{%
6573     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6574   }%
6575   \@tempdima\ht0 %
6576   \advance\@tempdima by \Fld@borderwidth bp %
6577   \advance\@tempdima by \Fld@borderwidth bp %
6578   \ht0\@tempdima
6579   \@tempdima\dp0 %
6580   \advance\@tempdima by \Fld@borderwidth bp %
6581   \advance\@tempdima by \Fld@borderwidth bp %
6582   \dp0\@tempdima
6583   \box0\relax
6584 }
6585 \def\DefaultHeightofSubmit{14pt}
6586 \def\DefaultWidthofSubmit{2cm}
6587 \def\DefaultHeightofReset{14pt}
6588 \def\DefaultWidthofReset{2cm}
6589 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6590 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6591 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6592 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6593 \def\DefaultHeightofText{\normalbaselineskip}
6594 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6595 \def\DefaultWidthofText{3cm}
6596 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6597 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6598 \def\DefaultOptionsofPushButton{print}
6599 \def\DefaultOptionsofCheckBox{print}
6600 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6601 \def\DefaultOptionsofListBox{print}
6602 \def\DefaultOptionsofComboBox{print,edit,sort}
6603 \def\DefaultOptionsofPopdownBox{print}

```

```
6604 \def\DefaultOptionsofRadio{print,notoggletooff}
```

21 Setup

```
6605 \ifHy@hyperfigures
6606 \Hy@Info{Hyper figures ON}%
6607 \else
6608 \Hy@Info{Hyper figures OFF}%
6609 \fi
6610 \ifHy@nesting
6611 \Hy@Info{Link nesting ON}%
6612 \else
6613 \Hy@Info{Link nesting OFF}%
6614 \fi
6615 \ifHy@hyperindex
6616 \Hy@Info{Hyper index ON}%
6617 \else
6618 \Hy@Info{Hyper index OFF}%
6619 \fi
6620 \ifHy@backref
6621 \Hy@Info{backreferencing ON}%
6622 \else
6623 \Hy@Info{backreferencing OFF}%
6624 \fi
6625 \ifHy@colorlinks
6626 \Hy@Info{Link coloring ON}%
6627 \else
6628 \Hy@Info{Link coloring OFF}%
6629 \fi
6630 \ifHy@ocgcolorlinks
6631 \Hy@Info{Link coloring with OCG ON}%
6632 \else
6633 \Hy@Info{Link coloring with OCG OFF}%
6634 \fi
6635 \ifHy@pdfa
6636 \Hy@Info{PDF/A mode ON}%
6637 \else
6638 \Hy@Info{PDF/A mode OFF}%
6639 \fi
```

22 Low-level utility macros

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

```
6640 \edef\hyper@hash{\string#}
6641 \edef\hyper@tilde{\string~}
6642 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6643 \def\@currentHref{Doc-Start}
6644 \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.

```
6645 \Hy@AtBeginDocument{%
6646 \Hy@pdfstringtrue
6647 \PDF@SetupDoc
```



```

6648 \let\PDF@SetupDoc\@empty
6649 \Hy@DisableOption{pdfpagescrop}%
6650 \Hy@DisableOption{pdfpagemode}%
6651 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6652 \Hy@DisableOption{pdfdirection}%
6653 \Hy@DisableOption{pdfviewarea}%
6654 \Hy@DisableOption{pdfviewclip}%
6655 \Hy@DisableOption{pdfprintarea}%
6656 \Hy@DisableOption{pdfprintclip}%
6657 \Hy@DisableOption{pdfprintsclaling}%
6658 \Hy@DisableOption{pdfduplex}%
6659 \Hy@DisableOption{pdfpicktraybypdfsize}%
6660 \Hy@DisableOption{pdfprintpagerange}%
6661 \Hy@DisableOption{pdfnumcopies}%
6662 \Hy@DisableOption{pdfstartview}%
6663 \Hy@DisableOption{pdfstartpage}%
6664 \Hy@DisableOption{pdftoolbar}%
6665 \Hy@DisableOption{pdfmenubar}%
6666 \Hy@DisableOption{pdfwindowui}%
6667 \Hy@DisableOption{pdfitwindow}%
6668 \Hy@DisableOption{pdfcenterwindow}%
6669 \Hy@DisableOption{pdfdisplaydoctitle}%
6670 \Hy@DisableOption{pdfpagelayout}%
6671 \Hy@DisableOption{pdflang}%
6672 \Hy@DisableOption{baseurl}%
6673 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6674 \Hy@pdfstringfalse
6675 }

```

Ignore star from referencing macros:

```

6676 \LetLtxMacro\NoHy@OrgRef\ref
6677 \DeclareRobustCommand*{\ref}{%
6678   \ifstar\NoHy@OrgRef\NoHy@OrgRef
6679 }
6680 \LetLtxMacro\NoHy@OrgPageRef\pageref
6681 \DeclareRobustCommand*{\pageref}{%
6682   \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6683 }

```

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.

```

6684 \def\NoHyper{%
6685   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6686   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6687   \global\let\hyper@livelink\hyper@link
6688   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6689   \let\hyper@anchor\ltx@gobble
6690   \let\hyper@anchorstart\ltx@gobble
6691   \def\hyper@anchorend{\Hy@xspace@end}%
6692   \let\hyper@linkstart\ltx@gobbletwo
6693   \def\hyper@linkend{\Hy@xspace@end}%
6694   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%

```

```

6695 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6696 \let\Hy@backout\@gobble
6697 }
6698 \def\stop@hyper{%
6699 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6700 \let\Hy@backout\@gobble
6701 \let\hyper@@anchor\ltx@gobble
6702 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6703 \let\hyper@anchor\ltx@gobble
6704 \let\hyper@anchorstart\ltx@gobble
6705 \def\hyper@anchorend{\Hy@xspace@end}%
6706 \let\hyper@linkstart\ltx@gobbletwo
6707 \def\hyper@linkend{\Hy@xspace@end}%
6708 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6709 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6710 }
6711 \def\endNoHyper{%
6712 \global\let\hyper@link\hyper@livelink
6713 }
6714 \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:

```

6715 \nohyperref
6716 \RequirePackage{letltxmacro}[2008/06/13]
6717 \let\hyper@@anchor\@gobble
6718 \def\hyper@link##1##2##3{##3}%
6719 \let\hyper@anchorstart\@gobble
6720 \let\hyper@anchorend\@empty
6721 \let\hyper@linkstart\@gobbletwo
6722 \let\hyper@linkend\@empty
6723 \def\hyper@linkurl##1##2{##1}%
6724 \def\hyper@linkfile##1##2##3{##1}%
6725 \def\hyper@link@{##1}##2##3{##3}%
6726 \let\PDF@SetupDoc\@empty
6727 \let\PDF@FinishDoc\@empty
6728 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6729 \def\Acrobatmenu#1##2{\leavevmode#2}
6730 \let\pdfstringdefDisableCommands\@gobbletwo
6731 \let\texorpdfstring\@firstoftwo
6732 \let\pdfbookmark\@undefined
6733 \newcommand\pdfbookmark[3]{}{}
6734 \let\phantomsection\@empty
6735 \let\hypersetup\@gobble
6736 \let\hyperbaseurl\@gobble
6737 \newcommand*{\href}[3]{}{##3}
6738 \let\hyperdef\@gobbletwo
6739 \let\hyperlink\@gobble

```

```

6740 \let\hypertarget\@gobble
6741 \def\hyperref{%
6742   \@ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6743 }
6744 \long\def\@gobbleopt[#1]{%
6745 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6746 \LetLtxMacro\NoHy@OrgRef\ref
6747 \DeclareRobustCommand*{\ref}{%
6748   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6749 }
6750 \LetLtxMacro\NoHy@OrgPageRef\pageref
6751 \DeclareRobustCommand*{\pageref}{%
6752   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6753 }
6754 \nohyperref

```

25 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6755 \*package
6756 \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.

```

6757 \if@filesw
6758   \ifHy@typexml
6759     \immediate\closeout\@mainaux
6760     \immediate\openout\@mainaux\jobname.aux\relax
6761     \immediate\write\@auxout{<relaxxml>\relax}%
6762   \fi
6763   \immediate\write\@auxout{%
6764     \string\providecommand\string\HyperFirstAtBeginDocument{%
6765       \string\AtBeginDocument}^^J%
6766     \string\HyperFirstAtBeginDocument{%
6767       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6768       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6769       \string\gdef\string\contentsline%
6770         \string#1\string#2\string#3\string#4{%
6771         \string\oldcontentsline%
6772         {\string#1}{\string#2}{\string#3}}^^J%
6773       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6774       \string\gdef\string\newlabel\string#1\string#2{%
6775       \string\newlabelxx{\string#1}\string#2}^^J%
6776       \string\gdef\string\newlabelxx%
6777         \string#1\string#2\string#3\string#4\string#5\string#6{%
6778         \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.

```

6779   \string\AtEndDocument{%
6780     \string\ifx\string\hyper@anchor\string\@undefined^^J%
6781     \string\let\string\contentsline\string\oldcontentsline^^J%

```

```

6782      \string\let\string\newlabel\string\oldnewlabel^^J%
6783      \string\fi%
6784      }^^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.

```

6785      \string\fi%
6786      }^^J%
6787      \string\global\string\let\string\hyper@last\relax^^J%
6788      \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6789      }%
6790      \fi
6791      \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.

```

6792      \ifx\hyper@last\@undefined
6793      \def\@starttoc#1{%
6794      \begingroup
6795      \makeatletter
6796      \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6797      \IfFileExists{\jobname.#1}{%
6798      \Hy@WarningNoLine{%
6799      old #1 file detected, not used; run LaTeX again%
6800      }%
6801      }{}%
6802      \if@filesw
6803      \expandafter\newwrite\csname tf@#1\endcsname
6804      \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6805      \fi
6806      \@nobreakfalse
6807      \endgroup
6808      }%
6809      \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}}}%
6810      \fi
6811      }

```

26 Title strings

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

```

6812 \ifHy@pdfusetitle
6813 \let\HyOrg@title\title
6814 \let\HyOrg@author\author
6815 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6816 \def\Hy@scanopttitle[#1]{%
6817 \gdef\Hy@title{#1}%
6818 \HyOrg@title[{#1}]%
6819 }%
6820 \def\Hy@scantitle#1{%
6821 \gdef\Hy@title{#1}%
6822 \HyOrg@title{#1}%
6823 }%

```

```

6824 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6825 \def\Hy@scanoptauthor[#1]{%
6826   \gdef\Hy@author{#1}%
6827   \HyOrg@author[#{1}]%
6828 }%
6829 \def\Hy@scanauthor#1{%
6830   \gdef\Hy@author{#1}%
6831   \HyOrg@author{#1}%
6832 }%

```

The case, that `\title`, or `\author` are given before `hyperref` is loaded, is much more complicate, because LaTeX initializes the macros `\@title` and `\@author` with LaTeX error and warning messages.

```

6833 \begingroup
6834   \def\process@me#1\@nil#2{%
6835     \expandafter\let\expandafter\x\csname @#2\endcsname
6836     \edef\y{\expandafter\strip@prefix\meaning\x}%
6837     \def\c##1#1##2\@nil{%
6838       \ifx\\##1\\%
6839         \else
6840           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6841             \expandafter{x}%
6842         \fi
6843       }%
6844       \expandafter\c\y\relax#1\@nil
6845     }%
6846     \expandafter\process@me\string\@latex@\@nil{title}%
6847     \expandafter\process@me\string\@latex@\@nil{author}%
6848   \endgroup
6849 \fi
6850 \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.

A possible ¹removes its argument.

```

6851 \def\Hy@UseMaketitleString#1{%
6852   \ltx@ifundefined{Hy@#1}{-}{%
6853     \begingroup
6854       \let\Hy@saved@hook\pdfstringdefPreHook
6855       \pdfstringdefDisableCommands{%
6856         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6857         \let\newline\\%
6858         \def\and{; }%
6859         \let\thanks\@gobble%
6860       }%
6861       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6862         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6863           \csname Hy@#1\endcsname\@empty
6864         }%
6865       \fi

```

```

6866 \global\let\pdfstringdefPreHook\Hy@saved@hook
6867 \endgroup
6868 }%
6869 }
6870 \def\Hy@newline@title#1{ #1}
6871 \def\Hy@newline@author#1{, #1}
6872 \def\Hy@UseMaketitleInfos{%
6873 \Hy@UseMaketitleString{title}%
6874 \Hy@UseMaketitleString{author}%
6875 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6876 \RequirePackage{atbegshi}[2007/09/09]
6877 \let\Hy@EveryPageHook\ltx@empty
6878 \let\Hy@EveryPageBoxHook\ltx@empty
6879 \let\Hy@FirstPageHook\ltx@empty
6880 \AtBeginShipout{%
6881 \Hy@EveryPageHook
6882 \ifx\Hy@EveryPageBoxHook\ltx@empty
6883 \else
6884 \setbox\AtBeginShipoutBox=\vbox{%
6885 \offinterlineskip
6886 \Hy@EveryPageBoxHook
6887 \box\AtBeginShipoutBox
6888 }%
6889 \fi
6890 }
6891 \ltx@iffileloaded{hpdftex.def}{%
6892 \AtBeginShipout{%
6893 \Hy@FirstPageHook
6894 \global\let\Hy@FirstPageHook\ltx@empty
6895 }%
6896 }{%
6897 \AtBeginShipoutFirst{%
6898 \Hy@FirstPageHook
6899 }%
6900 }
6901 \g@addto@macro\Hy@FirstPageHook{%
6902 \PDF@FinishDoc
6903 \global\let\PDF@FinishDoc\ltx@empty
6904 }

```

28.1 PDF /PageLabels

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

```

6905 \ifHy@pdfpagelabels
6906 \begingroup\expandafter\expandafter\expandafter\endgroup
6907 \expandafter\ifx\curname thepage\endcsname\relax
6908 \Hy@pdfpagelabelsfalse
6909 \Hy@WarningNoLine{%
6910 Option `pdfpagelabels' is turned off\MessageBreak

```

```

6911     because \string\thepage\space is undefined%
6912 }%
6913 \csname fi\endcsname
6914 \csname iffalse\expandafter\endcsname
6915 \fi

```

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

```

6916 \def\thispdfpagelabel#1{%
6917   \gdef\HyPL@thisLabel{#1}%
6918 }%
6919 \global\let\HyPL@thisLabel\relax

```

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

```

6920 \let\HyPL@Labels\ltx@empty

```

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

```

6921 \newcount\Hy@abspage
6922 \Hy@abspage=0 %

```

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

```

6923 \def\HyPL@LastType{init}%
6924 \def\HyPL@LastNumber{0}%
6925 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6926 \def\HyPL@arabic{D}%
6927 \def\HyPL@Roman{R}%
6928 \def\HyPL@roman{r}%
6929 \def\HyPL@Alph{A}%
6930 \def\HyPL@alph{a}%

6931 \let\HyPL@SlidesSetPage\ltx@empty
6932 \ltx@ifclassloaded{slides}{%
6933   \def\HyPL@SlidesSetPage{%
6934     \advance\c@page\ltx@one
6935     \ifnum\value{page}>\ltx@one
6936       \protected@edef\HyPL@SlidesOptionalPage{%
6937         \Hy@SlidesFormatOptionalPage{\thepage}%
6938       }%
6939     \else
6940       \let\HyPL@SlidesOptionalPage\ltx@empty
6941     \fi
6942     \advance\c@page-\ltx@one
6943     \def\HyPL@page{%
6944       \csname the\Hy@SlidesPage\endcsname
6945       \HyPL@SlidesOptionalPage
6946     }%
6947   }%
6948 }{}%

```

`\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.

```

6949 \def\HyPL@EveryPage{%
6950   \begingroup
6951   \ifx\HyPL@thisLabel\relax

```

```

6952 \let\HyPL@page\thepage
6953 \HyPL@SlidesSetPage
6954 \else
6955 \let\HyPL@page\HyPL@thisLabel
6956 \global\let\HyPL@thisLabel\relax
6957 \fi
6958 \let\HyPL@Type\relax
6959 \ifnum\c@page>0 %
6960 \ifx\HyPL@SlidesSetPage\ltx@empty
6961 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6962 \fi
6963 \fi
6964 \let\Hy@temp Y%
6965 \ifx\HyPL@Type\HyPL@LastType
6966 \else
6967 \let\Hy@temp N%
6968 \fi
6969 \ifx\HyPL@Type\relax
6970 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6971 \else
6972 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6973 \fi
6974 \ifx\HyPL@Prefix\HyPL@LastPrefix
6975 \else
6976 \let\Hy@temp N%
6977 \fi
6978 \if Y\Hy@temp
6979 \advance\c@page by -1 %
6980 \ifnum\HyPL@LastNumber=\the\c@page\relax
6981 \else
6982 \let\Hy@temp N%
6983 \fi
6984 \Hy@StepCount\c@page
6985 \fi
6986 \if N\Hy@temp
6987 \ifx\HyPL@Type\relax
6988 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6989 \else
6990 \HyPL@StorePageLabel{%
6991 \ifx\HyPL@Prefix\@empty
6992 \else
6993 /P(\HyPL@Prefix)%
6994 \fi
6995 /S/\csname HyPL\HyPL@Type\endcsname
6996 \ifnum\the\c@page=1 %
6997 \else
6998 \space/St \the\c@page
6999 \fi
7000 }%
7001 \fi
7002 \fi
7003 \xdef\HyPL@LastNumber{\the\c@page}%
7004 \global\let\HyPL@LastType\HyPL@Type
7005 \global\let\HyPL@LastPrefix\HyPL@Prefix
7006 \endgroup
7007 \Hy@GlobalStepCount\Hy@abspage
7008 }%

```


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

```

7009 \def\HyPL@CheckThePage#1\@nil{%
7010   \HyPL@@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
7011 }%
```

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

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

```

7012 \def\HyPL@@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
7013   \def\Hy@tempa{#4}%
7014   \def\Hy@tempb{\csname\endcsname\c@page}%
7015   \ifx\Hy@tempa\Hy@tempb
7016     \expandafter\ifx\csname HyPL#3\endcsname\relax
7017     \else
7018       \def\HyPL@Type{#3}%
7019       \def\HyPL@Prefix{#2}%
7020       \fi
7021     \else
7022       \begingroup
7023       \let\Hy@next\endgroup
7024       \let\HyPL@found\@undefined
7025       \def\arabic{\HyPL@Format{arabic}}%
7026       \def\Roman{\HyPL@Format{Roman}}%
7027       \def\roman{\HyPL@Format{roman}}%
7028       \def\Alph{\HyPL@Format{Alph}}%
7029       \def\alph{\HyPL@Format{alph}}%
7030       \protected@edef\Hy@temp{#1}%
7031       \ifx\HyPL@found\relax
7032         \toks@{\expandafter{\Hy@temp}}%
7033         \edef\Hy@next{\endgroup
7034           \noexpand\HyPL@@@CheckThePage\the\toks@
7035           \noexpand\HyPL@found\relax\noexpand\@nil
7036         }%
7037       \fi
7038       \Hy@next
7039     \fi
7040   }%
```

`\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`.

```

7041 \def\HyPL@Format#1#2{%
7042   \ifx\HyPL@found\@undefined
7043     \expandafter\ifx\csname c@#2\endcsname\c@page
7044       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7045     \else
7046       \expandafter\noexpand\csname#1\endcsname{#2}%
7047     \fi
7048   \else
7049     \expandafter\noexpand\csname#1\endcsname{#2}%
7050   \fi
7051 }%
```

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

```

7052 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7053   \def\Hy@tempa{#3}%
7054   \def\Hy@tempb{\HyPL@found\relax}%
7055   \ifx\Hy@tempa\Hy@tempb
7056     \def\HyPL@Type{#2}%
7057     \def\HyPL@Prefix{#1}%
7058   \fi
7059 }%

```

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

```

7060 \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`.

```

7061 \def\HyPL@Useless{0<</S/D>>}%
7062 \@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.

```

7063 \def\HyPL@SetPageLabels{%
7064   \@onelevel@sanitize\HyPL@Labels
7065   \ifx\HyPL@Labels\@empty
7066   \else
7067     \ifx\HyPL@Labels\HyPL@Useless
7068     \else
7069       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7070     \fi
7071   \fi
7072 }%

```

```

7073 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7074 \fi

```

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

```

7075 \Hy@DisableOption{pdfpagelabels}
7076 </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`

```

7077 <{*pdfTeX}>
7078 \pdf@ifdraftmode{%
7079   \let\Hy@PutCatalog\ltx@gobble
7080 }{%
7081   \let\Hy@PutCatalog\pdfcatalog
7082 }
7083 </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.

```

7084 \< *vtex>
7085 \providecommand*\XR@ext}{pdf}
7086 \edef\Hy@VTeXversion{%
7087   \ifx\VTeXversion\undefined
7088     \z@
7089   \else
7090     \ifx\VTeXversion\relax
7091       \z@
7092     \else
7093       \VTeXversion
7094     \fi
7095   \fi
7096 }
7097 \begingroup
7098 \ifnum\Hy@VTeXversion<660 %
7099   \gdef\Hy@PutCatalog#1{%
7100     \Hy@WarningNoLine{%
7101       VTeX 6.59g or above required for pdfpagelabels%
7102     }%
7103   }%
7104 \else
7105   \gdef\Hy@PutCatalog#1{%
7106     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7107   }%
7108   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7109     \ifx\#2\%
7110       \else
7111         \immediate\special{!pdfpagelabels #2}%
7112       \fi
7113     }%
7114   \fi
7115 \endgroup
7116 \< /vtex>

7117 \< *pdftex | vtex>

```

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

```

7118 \ifHy@pdfpagelabels
7119 \def\HyPL@StorePageLabel#1{%
7120   \toks@ \expandafter{\HyPL@Labels}%
7121   \xdef\HyPL@Labels{%
7122     \the\toks@
7123     \the\Hy@abspage<<#1>>%
7124   }%
7125 }%

```

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.

```

7126 \RequirePackage{atveryend}[2009/12/07]%
7127 \AtVeryEndDocument{%
7128   \HyPL@SetPageLabels
7129 }%

7130 \fi
7131 \< /pdftex | vtex>

```

28.1.2 xetex

```

7132 ⟨*xetex⟩
7133 \HyPsd@LoadUnicode
7134 \Hy@unicodetrue
7135 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7136 \else
7137   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7138 \fi
7139 \HyPsd@LoadStringEnc
7140 \define@key{Hyp}{unicode}[true]{%
7141   \Hy@boolkey{unicode}{#1}%
7142   \ifHy@unicode
7143   \else
7144     \Hy@Warning{%
7145       XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7146       option setting `unicode=false'%
7147     }%
7148   \Hy@unicodetrue
7149 \fi
7150 }
7151 \define@key{Hyp}{pdfencoding}{%
7152   \edef\HyPsd@temp{#1}%
7153   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7154     \let\HyPsd@pdfencoding\HyPsd@temp
7155   \else
7156     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7157       \let\HyPsd@pdfencoding\HyPsd@temp
7158     \else
7159       \Hy@Warning{%
7160         XeTeX driver only supports\MessageBreak
7161         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7162         setting `pdfencoding=\HyPsd@temp'%
7163       }%
7164     \fi
7165   \fi
7166 }
7167 \let\HyXeTeX@CheckUnicode\relax

```

Since 2016 (x)dvipdfmx has a special to control the spacing of annotation borders.

So let's make use of it:

```

7168 \def\setpdfinkmargin#1{%
7169   \begingroup
7170     \setlength{\dimen@}{#1}%
7171     \special{dvipdfmx:config g \strip@pt\dimen@}%
7172   \endgroup}
7173 ⟨/xetex⟩

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7174 ⟨*pdfmarkbase⟩
7175 \begingroup
7176 \@ifundefined{headerps@out}{}{%
7177   \toks@{\expandafter{\Hy@FirstPageHook}%
7178   \xdef\Hy@FirstPageHook{%
7179     \noexpand\headerps@out{%
7180       systemdict /pdfmark known%
7181       {%
7182         userdict /?pdfmark systemdict /exec get put%

```

```

7183     }{%
7184     userdict /?pdfmark systemdict /pop get put %
7185     userdict /pdfmark systemdict /cleartomark get put%
7186     }%
7187     ifelse%
7188     }%
7189     \the\toks@
7190     }%
7191     }%
7192 \endgroup
7193 \</pdfmarkbase>

```

\Hy@PutCatalog

```

7194 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
7195 \<*pdfmarkbase>
7196 \def\Hy@PutCatalog#1{%
7197   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7198 }
7199 \</pdfmarkbase>

7200 \<*pdfmarkbase | dvipdfm | xetex>
7201 \ifHy@pdfpagelabels

```

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

```

7202 \def\HyPL@StorePageLabel#1{%
7203   \if@filesw
7204     \begingroup
7205     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7206     \immediate\write\@mainaux{%
7207       \string\HyPL@Entry{\Hy@tempa}%
7208     }%
7209     \endgroup
7210   \fi
7211 }%

```

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.

```

7212 \Hy@AtBeginDocument{%
7213   \if@filesw
7214     \immediate\write\@mainaux{%
7215       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7216     }%
7217   \fi
7218   \ifx\HyPL@Labels\@empty
7219     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7220   \else
7221     \HyPL@SetPageLabels
7222   \fi
7223   \let\HyPL@Entry\@gobble
7224 }%

```

\HyPL@Entry

```

7225 \def\HyPL@Entry#1{%
7226   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7227     \HyPL@Labels
7228     #1%

```

```

7229 }%
7230 }%

7231 \fi
7232 </pdfmarkbase | dvipdfm | xetex>

7233 <*package>

7234 \ifx\MaybeStopEarly\relax
7235 \else
7236 \Hy@stoppedearlytrue
7237 \expandafter\MaybeStopEarly
7238 \fi
7239 \Hy@stoppedearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

7240 \def\Hy@CounterExists#1{%
7241 \begingroup\expandafter\expandafter\expandafter\endgroup
7242 \expandafter\ifx\csname c@#1\endcsname\relax
7243 \expandafter\@gobble
7244 \else
7245 \begingroup\expandafter\expandafter\expandafter\endgroup
7246 \expandafter\ifx\csname the#1\endcsname\relax
7247 \expandafter\expandafter\expandafter\@gobble
7248 \else
7249 \expandafter\expandafter\expandafter\@firstofone
7250 \fi
7251 \fi
7252 }
7253 \Hy@CounterExists{section}{%
7254 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7255 }
7256 \Hy@CounterExists{part}{%
7257 \providecommand\theHpart{\arabic{part}}}%
7258 }
7259 \ltx@ifundefined{thechapter}{%
7260 \providecommand\theHsection {\arabic{section}}}%

```

```

7261 \providecommand\theHfigure    {\arabic{figure}}}%
7262 \providecommand\theHtable     {\arabic{table}}}%
7263 }{%
7264 \providecommand\theHchapter    {\arabic{chapter}}}%
7265 \providecommand\theHfigure     {\theHchapter.\arabic{figure}}}%
7266 \providecommand\theHtable      {\theHchapter.\arabic{table}}}%
7267 \providecommand\theHsection    {\theHchapter.\arabic{section}}}%
7268 }
7269 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7270 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7271 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
7272 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7273 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
7274 \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.

```

7275 \let\H@item\item
7276 \newcounter{Item}
7277 \def\theHItem{\arabic{Item}}
7278 \def\item{%
7279   \@hyper@itemfalse
7280   \if@nmbrrlist\@hyper@itemtrue\fi
7281   \H@item
7282 }
7283 \providecommand\theHenumi      {\theHItem}
7284 \providecommand\theHenumii     {\theHItem}
7285 \providecommand\theHenumiii    {\theHItem}
7286 \providecommand\theHenumiv     {\theHItem}
7287 \providecommand\theHHfootnote  {\arabic{Hfootnote}}
7288 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7289 \@ifundefined{theHHmpfootnote}{%
7290   \let\theHHmpfootnote\theHHfootnote
7291 }{}

```

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.

```

7292 \let\H@refstepcounter\refstepcounter
7293 \edef\name@of@eq{equation}%
7294 \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.

```

7295 \newif\if@hyper@item
7296 \newif\if@skiphyperref
7297 \@hyper@itemfalse
7298 \@skiphyperreffalse
7299 \def\refstepcounter#1{%
7300   \ifHy@pdfstring
7301   \else
7302     \H@refstepcounter{#1}%
7303     \edef\This@name{#1}%
7304     \ifx\This@name\name@of@slide
7305       \else
7306         \if@skiphyperref

```

```

7307 \else
7308 \if@hyper@item
7309 \stepcounter{Item}%
7310 \hyper@refstepcounter{Item}%
7311 \@hyper@itemfalse
7312 \else
7313 \hyper@refstepcounter{#1}%
7314 \fi
7315 \fi
7316 \fi
7317 \fi
7318 }
7319 \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.

```

7320 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7321 \def\hyper@refstepcounter#1{%
7322 \edef\This@name{#1}%
7323 \ifx\This@name\name@of@eq
7324 \@ifundefined{theHequation}{%
7325 \make@stripped@name{\theequation}%
7326 \let\theHequation\newname
7327 }{}%
7328 \fi
7329 \HyCnt@ProvideTheHCounter{#1}%
7330 \hyper@makecurrent{#1}%
7331 \ifmeasuring@
7332 \else
7333 \Hy@raisedlink{%
7334 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7335 }%
7336 \fi
7337 }

```

`\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.

```

7338 \def\HyCnt@ProvideTheHCounter#1{%
7339 \@ifundefined{theH#1}{%
7340 \expandafter\def\csname theH#1\endcsname{}%
7341 \def\Hy@temp{\@elt{#1}}%
7342 \ltx@onelevel@sanitize\Hy@temp
7343 \let\HyOrg@elt\@elt
7344 \edef\@elt{%
7345 \noexpand\HyCnt@LookForParentCounter
7346 \expandafter\noexpand\csname theH#1\endcsname
7347 }%
7348 \cl@ckpt
7349 \let\@elt\HyOrg@elt

```



```

7350 \expandafter
7351 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7352 \expandafter{%
7353   \expandafter\@arabic\csname c@#1\endcsname
7354 }%
7355 }{}%
7356 }

```

\Hy@LookForParentCounter

```

7357 \def\HyCnt@LookForParentCounter#1#2{%
7358   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7359   \ltx@ifundefined{cl@#2}{%
7360   }{%
7361     \ltx@onelevel@sanitize\Hy@temp@A
7362     \edef\Hy@temp@A{%
7363       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7364     }\Hy@temp@A
7365     \ifn@
7366       \ltx@ifundefined{theH#2}{%
7367         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7368         \expandafter{%
7369           \expandafter\@arabic\csname c@#2\endcsname.%
7370         }%
7371       }{%
7372         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7373         \expandafter{%
7374           \csname theH#2\endcsname.%
7375         }%
7376       }%
7377     \fi
7378   }%
7379 }

```

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`.

```

7380 \begingroup\expandafter\expandafter\expandafter\endgroup
7381 \expandafter\ifx\csname chapter\endcsname\relax
7382   \def\Hy@chapterstring{section}%
7383 \else
7384   \def\Hy@chapterstring{chapter}%
7385 \fi
7386 \def\Hy@appendixstring{appendix}
7387 \def\Hy@chapapp{\Hy@chapterstring}
7388 \ltx@ifundefined{appendix}{%
7389 }{%
7390   \let\HyOrg@appendix\appendix
7391   \def\Hy@AlphNoErr#1{%
7392     \ifnum\value{#1}>26 %
7393       Alph\number\value{#1}%
7394     \else
7395       \ifnum\value{#1}<1 %
7396         Alph\number\value{#1}%
7397       \else

```

```

7398     \Alph{#1}%
7399     \fi
7400   \fi
7401 }%
7402 \def\appendix{%
7403   \ltx@ifundefined{chapter}{%
7404     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7405   }{%
7406     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7407   }%
7408   \xdef\Hy@chapapp{\Hy@appendixstring}%
7409   \HyOrg@appendix
7410 }%
7411 }

```

\Hy@Test@alph

```

7412 \def\Hy@Test@alph#1{%
7413   \ifcase#1\or
7414     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7415     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7416     u\or v\or w\or x\or y\or z%
7417   \else
7418     \@ctrerr
7419   \fi
7420 }

```

\Hy@Test@Alph

```

7421 \def\Hy@Test@Alph#1{%
7422   \ifcase#1\or
7423     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7424     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7425     U\or V\or W\or X\or Y\or Z%
7426   \else
7427     \@ctrerr
7428   \fi
7429 }

```

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

```

7430 \def\hyper@makecurrent#1{%
7431   \begingroup
7432   \Hy@safe@activestruer
7433   \edef\Hy@param{#1}%
7434   \ifx\Hy@param\Hy@chapterstring
7435     \let\Hy@param\Hy@chapapp
7436   \fi
7437   \ifHy@hypertextnames
7438     \let\@number\@firstofone
7439     \def\@fnsymbol##1{\fnsymbol\number##1}%
7440     \def\@arabic##1{\number##1}%
7441     \ifx\@alph\Hy@Test@alph
7442     \else
7443       \def\@alph{alph\number}%
7444     \fi
7445     \ifx\@Alph\Hy@Test@Alph
7446     \else
7447       \def\@Alph{Alph\number}%

```

```

7448 \fi
7449 \ifHy@naturalnames
7450 \let\textlatin\@firstofone
7451 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7452 \else
7453 \xdef\HyperGlobalCurrentHref{%
7454 \csname
7455 the%
7456 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7457 #1%
7458 \endcsname
7459 }%
7460 \fi
7461 \xdef\HyperGlobalCurrentHref{%
7462 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7463 }%
7464 \else
7465 \Hy@GlobalStepCount\Hy@linkcounter
7466 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7467 \fi
7468 \endgroup
7469 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7470 \ifHy@localanchorname
7471 \let\@currentHref\HyperLocalCurrentHref
7472 \else
7473 \global\let\@currentHref\HyperGlobalCurrentHref
7474 \fi
7475 }

```

\Hy@MakeCurrentHref

```

7476 \def\Hy@MakeCurrentHref#1{%
7477 \edef\HyperLocalCurrentHref{#1}%
7478 \@onelevel@sanitize\HyperLocalCurrentHref
7479 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7480 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7481 \ifHy@localanchorname
7482 \let\@currentHref\HyperLocalCurrentHref
7483 \else
7484 \global\let\@currentHref\HyperGlobalCurrentHref
7485 \fi
7486 }

```

\Hy@MakeCurrentHrefAuto

```

7487 \def\Hy@MakeCurrentHrefAuto#1{%
7488 \Hy@GlobalStepCount\Hy@linkcounter
7489 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7490 }

```

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

```

7491 \def\@currentHlabel{\@currentHref}

7492 \@ifpackageloaded{fancyvrb}{%
7493 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
7494 \def\FV@StepLineNo{%
7495 \FV@SetLineNo
7496 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7497 \FV@StepLineNo

```

```

7498 }%
7499 }%
7500 }{}

```

30 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options `hypertextnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option `pageanchor` is set to false.

`\lastpage@putlabel`

```

7501 \Hy@AtBeginDocument{%
7502   \@ifclassloaded{revtex4}{%
7503     \@namedef{ver@lastpage.sty}{1994/06/25}%
7504   }{}%
7505   \@ifpackageloaded{lastpage}{%
7506     \ifHy@pageanchor
7507     \else
7508       \Hy@WarningNoLine{%
7509         The \string\pageref{LastPage} link doesn't work\MessageBreak
7510         with disabled option `pageanchor'%
7511       }%
7512     \fi
7513     \def\lastpage@putlabel{%
7514       \addtocounter{page}{-1}%
7515       \if@filesw
7516         \begingroup
7517           \let\@number\@firstofone
7518           \ifHy@pageanchor
7519             \ifHy@hypertextnames
7520               \ifHy@plainpages
7521                 \def\Hy@temp{\arabic{page}}%
7522               \else
7523                 \Hy@unicodefalse
7524                 \pdfstringdef\Hy@temp{\thepage}%
7525               \fi
7526             \else
7527               \def\Hy@temp{\the\Hy@pagecounter}%
7528             \fi
7529           \fi
7530           \immediate\write\@auxout{%
7531             \string\newlabel
7532             {LastPage}{}{\thepage}{}{}%
7533             \ifHy@pageanchor page.\Hy@temp\fi}{}%
7534           }%
7535         \endgroup
7536       \fi
7537       \addtocounter{page}{1}%
7538     }%
7539   \@ifclassloaded{revtex4}{%
7540     \begingroup
7541     \toks@\expandafter{\lastpage@putlabel}%

```

```

7542 \edef\x{\endgroup
7543 \def\noexpand\lastpage@putlabel{%
7544 \noexpand\stepcounter{page}%
7545 \the\toks@
7546 \noexpand\addtocounter{page}\noexpand\m@ne
7547 }%
7548 }%
7549 \x
7550 }{}%
7551 }{}%
7552 }
7553 \</package>
7554 \<*check>
7555 \checkpackage{lastpage}[1994/06/25]
7556 \checkcommand\def\lastpage@putlabel{%
7557 \addtocounter{page}{-1}%
7558 \immediate\write\@auxout{%
7559 \string\newlabel{LastPage}{\the\thepage}}%
7560 }%
7561 \addtocounter{page}{1}%
7562 }
7563 \</check>
7564 \<*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.

```

7565 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7566 \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:

```

7567 \@ifpackageloaded{titlesec}{%
7568 \def\ttl@Hy@steplink#1{%
7569 \Hy@MakeCurrentHrefAuto{#1*}%
7570 \edef\ttl@Hy@saveanchor{%
7571 \noexpand\Hy@raisedlink{%
7572 \noexpand\hyper@anchorstart{\@currentHref}%
7573 \noexpand\hyper@anchorend
7574 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7575 \noexpand\ttl@Hy@PatchSaveWrite
7576 }%
7577 }%
7578 }%
7579 \def\ttl@Hy@PatchSaveWrite{%
7580 \begingroup
7581 \toks@\expandafter{\ttl@savewrite}%
7582 \edef\x{\endgroup
7583 \def\noexpand\ttl@savewrite{%
7584 \let\noexpand\@currentHref
7585 \noexpand\ttl@Hy@SavedCurrentHref

```

```

7586      \the\toks@
7587      }%
7588      }%
7589      \x
7590      }%
7591      \def\ttl@Hy@refstepcounter#1{%
7592        \let\ttl@b\Hy@raisedlink
7593        \def\Hy@raisedlink##1{%
7594          \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7595          }%
7596          \refstepcounter{#1}%
7597          \let\Hy@raisedlink\ttl@b
7598          }%
7599      }{}

```

Package titletoc support:

```

7600 \@ifpackageloaded{titletoc}{%
7601   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7602 }{}

```

33 Package varioref support

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

```

7603 \AtBeginDocument{%
7604   \def\Hy@varioref@undefined{{??}{??}{}}{}
7605   \@ifpackageloaded{varioref}{%
7606     \def\vref@pagenum#1#2{%
7607       \@ifundefined{r@#2}{%
7608         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7609       }{}%
7610       \edef#1{\getpagerefnumber{#2}}%
7611     }%
7612   }{}

```

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

```

7613 \def\Hy@varioref@refstepcounter#1{%
7614   \stepcounter{#1}%
7615   \protected@edef\@currentlabel{%
7616     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7617   }%
7618 }
7619 \ifx\refstepcounter\Hy@varioref@refstepcounter
7620   \let\H@refstepcounter\refstepcounter
7621   \let\refstepcounter\Hy@saved@refstepcounter
7622 \fi
7623 }

```

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

```

7624 \ifpackageloaded{longtable}{%
7625   \begingroup
7626   \def\y{\LT@array}%
7627   \@ifundefined{scr@LT@array}{%
7628     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7629   }\def\y{\scr@LT@array}%
7630   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7631     \expandafter\endgroup
7632     \expandafter\def\y[#1]#2{%
7633       \H@refstepcounter{#1}%
7634       \hyper@makecurrent{table}%
7635       \let\Hy@LT@currentHref\@currentHref
7636       #2\@sharp#3#4%
7637     }%
7638   }%
7639   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7640 \begingroup
7641 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7642   \endgroup
7643   \def\LT@start{%
7644     #1%
7645     \ifvoid\LT@foot#2\fi
7646     \let\@currentHref\Hy@LT@currentHref
7647     \Hy@raisedlink{%
7648       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7649     }%
7650     #3%
7651   }%
7652 }%
7653 \expandafter\x\LT@start\@nil
7654 }{}

```

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.

```

7655 \let\new@refstepcounter\refstepcounter
7656 \let\H@equation\equation
7657 \let\H@endequation\endequation
7658 \@ifpackageloaded{amsmath}{%
7659   \long\def\Hy@temp{%
7660     \incr@eqnum
7661     \mathdisplay@push
7662     \st@rredfalse \global\@eqnswtrue
7663     \mathdisplay{equation}%
7664   }%
7665   \ifx\Hy@temp\equation
7666     \expandafter\ifx\csname if@fleqn\expandafter\endcsname

```

```

7667         \csname iftrue\endcsname
7668     \else
7669         \long\def\equation{%
7670             \mathdisplay@push
7671             \st@rredfalse \global\@eqnswtrue
7672             \mathdisplay{equation}%
7673             \incr@eqnum
7674         }%
7675     \fi
7676 \fi
7677 }{%
7678 \def\equation{%
7679     \let\refstepcounter\H@refstepcounter
7680     \H@equation
7681     \@ifundefined{theHequation}{%
7682         \make@stripped@name{\theequation}%
7683         \let\theHequation\newname
7684     }{}%
7685     \hyper@makecurrent{equation}%

```

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

```

7686 \mathopen{%
7687     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7688 }%
7689 \let\refstepcounter\new@refstepcounter
7690 }%
7691 \def\endequation{%
7692     \ifx\Hy@raisedlink\lt@empty
7693         \hyper@anchorend
7694     \else
7695         \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7696     \fi
7697     \H@endequation
7698 }%
7699 }

```

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.

```

7700 \newif\if@eqnstar
7701 \@eqnstarfalse
7702 \let\H@eqnarray\eqnarray
7703 \let\H@endeqnarray\endeqnarray
7704 \def\eqnarray{%
7705     \let\Hy@reserved@a\relax
7706     \def\@currentHref{}%
7707     \H@eqnarray
7708     \if@eqnstar
7709     \else
7710         \ifx\\\@currentHref\\%
7711         \else
7712             \@ifundefined{theHequation}{%
7713                 \make@stripped@name{\theequation}%
7714                 \let\theHequation\newname
7715             }{}%
7716             \hyper@makecurrent{equation}%

```



```

7717 \mathopen{%
7718 \Hy@raisedlink{%
7719 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7720 }%
7721 }%
7722 \fi
7723 \fi
7724 }
7725 \def\endeqnarray{%
7726 \H@endeqnarray
7727 }

```

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.

```

7728 \@namedef{eqnarray*}{%
7729 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7730 }
7731 \@namedef{endeqnarray*}{%
7732 \nonumber\endeqnarray\@eqnstarfalse
7733 }

```

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

```

7734 \ltx@ifundefined{subeqnarray}{}{%
7735 \let\H@subeqnarray\subeqnarray
7736 \let\H@endsubeqnarray\endsubeqnarray
7737 \def\subeqnarray{%
7738 \let\Hy@reserved@a\relax
7739 \H@subeqnarray
7740 \@ifundefined{theHequation}{%
7741 \make@stripped@name{\theequation}%
7742 \let\theHequation\newname
7743 }{}%
7744 \hyper@makecurrent{equation}%
7745 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7746 }%
7747 \def\endsubeqnarray{%
7748 \H@endsubeqnarray
7749 }%
7750 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7751 }

```

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

```

7752 \def\make@stripped@name#1{%
7753 \begingroup
7754 \escapechar\m@ne
7755 \global\let\newname\@empty
7756 \protected@edef\Hy@tempa{#1}%
7757 \edef\@tempb{%
7758 \noexpand\@tfor\noexpand\Hy@tempa:=%
7759 \expandafter\strip@prefix\meaning\Hy@tempa
7760 }%
7761 \@tempb\do{%
7762 \if\Hy@tempa\else
7763 \if\Hy@tempa\else
7764 \xdef\newname{\newname\Hy@tempa}%

```

```

7765     \fi
7766     \fi
7767   }%
7768 \endgroup
7769 }

```

Support for amsmath's subequations:

```

7770 \begingroup\expandafter\expandafter\expandafter\endgroup
7771 \expandafter\ifx\csname subequations\endcsname\relax
7772 \else
7773   \let\HyOrg@subequations\subequations
7774   \def\subequations{%
7775     \stepcounter{equation}%
7776     \protected@edef\theHparentequation{%
7777       \@ifundefined{theHequation}\theequation\theHequation
7778     }%
7779     \addtocounter{equation}{-1}%
7780     \HyOrg@subequations
7781     \def\theHequation{\theHparentequation\alph{equation}}%
7782     \ignorespaces
7783   }%
7784 \fi

```

Support for package `amsthm` (Daniel Müllner): also `cleveref`.

```

7785 \Hy@AtBeginDocument{%
7786   \@ifpackageloaded{cleveref}{%
7787     \let\Hy@savedthm\@thm
7788     \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7789   }{%
7790     \@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

7791 \def\Hy@temp#1#2#3{%
7792   \ifhmode\unskip\unskip\par\fi
7793   \normalfont
7794   \trivlist
7795   \let\thmheadnl\relax
7796   \let\thm@swap\@gobble
7797   \let\thm@indent\indent % indent
7798   \thm@headfont{\scshape}% heading font small caps
7799   \thm@notefont{\fontseries\mddefault\upshape}%
7800   \thm@headpunct{.}% add period after heading
7801   \thm@headsep 5p@ plus\p@ minus\p@\relax
7802   \thm@space@setup
7803   #1% style overrides
7804   \@topsep \thm@preskip % used by thm head
7805   \@topsepadd \thm@postskip % used by \@endparenv
7806   \def\@tempa{#2}\ifx\@empty\@tempa
7807     \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7808   \else
7809     \refstepcounter{#2}%
7810     \def\@tempa{%
7811       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7812     }%
7813   \fi

```

```

7814 \@tempa
7815 }%
7816 \ifx\Hy@temp\@thm
7817 \def\@thm#1#2#3{%
7818 \ifhmode
7819 \unskip\unskip\par
7820 \fi
7821 \normalfont
7822 \trivlist
7823 \let\thmheadnl\relax
7824 \let\thm@swap\@gobble
7825 \let\thm@indent\indent % indent
7826 \thm@headfont{\scshape}% heading font small caps
7827 \thm@notefont{\fontseries\mddefault\upshape}%
7828 \thm@headpunct{.}% add period after heading
7829 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7830 \thm@space@setup
7831 #1% style overrides
7832 \@topsep \thm@preskip % used by thm head
7833 \@topsepadd \thm@postskip % used by \@endparenv
7834 \def\dth@counter{#2}%
7835 \ifx\@empty\dth@counter
7836 \def\@tempa{%
7837 \@oparg{\@begintheorem{#3}-{}}[]%
7838 }%
7839 \else
7840 \H@refstepcounter{#2}%
7841 \hyper@makecurrent{#2}%
7842 \let\Hy@dth@currentHref\@currentHref
7843 \def\@tempa{%
7844 \@oparg{\@begintheorem{#3}-{\csname the#2\endcsname}}[]%
7845 }%
7846 \fi
7847 \@tempa
7848 }%
7849 \else
7850 \def\@thm#1#2#3{%
7851 \ifhmode
7852 \unskip\unskip\par
7853 \fi
7854 \normalfont
7855 \trivlist
7856 \let\thmheadnl\relax
7857 \let\thm@swap\@gobble
7858 \thm@notefont{\fontseries\mddefault\upshape}%
7859 \thm@headpunct{.}% add period after heading
7860 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7861 \thm@space@setup
7862 #1% style overrides
7863 \@topsep \thm@preskip % used by thm head
7864 \@topsepadd \thm@postskip % used by \@endparenv
7865 \def\dth@counter{#2}%
7866 \ifx\@empty\dth@counter
7867 \def\@tempa{%
7868 \@oparg{\@begintheorem{#3}-{}}[]%
7869 }%
7870 \else

```

```

7871 \H@refstepcounter{#2}%
7872 \hyper@makecurrent{#2}%
7873 \let\Hy@dth@currentHref\@currentHref
7874 \def\@tempa{%
7875 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7876 }%
7877 \fi
7878 \@tempa
7879 }%
7880 \fi
7881 \dth@everypar={%
7882 \@minipagefalse
7883 \global\@newlistfalse
7884 \@noparitemfalse
7885 \if@inlabel
7886 \global\@inlabelfalse
7887 \begingroup
7888 \setbox\z@\lastbox
7889 \ifvoid\z@
7890 \kern-\itemindent
7891 \fi
7892 \endgroup
7893 \ifx\@empty\dth@counter
7894 \else
7895 \Hy@raisedlink{%
7896 \hyper@anchorstart{%
7897 \ltx@ifundefined{Hy@dth@currentHref}%
7898 \@currentHref\Hy@dth@currentHref
7899 }\hyper@anchorend
7900 }%
7901 \fi
7902 \unhbox\@labels
7903 \fi
7904 \if@nobreak
7905 \@nobreakfalse \clubpenalty\@M
7906 \else
7907 \clubpenalty\@clubpenalty \everypar{}%
7908 \fi
7909 }%
7910 }%

```

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

```

7911 {%
7912 \let\Hy@savethm\@thm
7913 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7914 }%
7915 }%
7916 }

```

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.

```

7917 \ifHy@hyperfootnotes
7918   \newcounter{Hfootnote}%
7919   \let\H@@footnotetext\@footnotetext
7920   \let\H@@footnotemark\@footnotemark
7921   \def\@xfootnotenext[#1]{%
7922     \begingroup
7923       \csname c@\@mpfn\endcsname #1\relax
7924       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7925     \endgroup
7926     \ifx\@footnotetext\@mpfootnotetext
7927       \expandafter\H@@mpfootnotetext
7928     \else
7929       \expandafter\H@@footnotetext
7930     \fi
7931   }%
7932   \def\@xfootnotemark[#1]{%
7933     \begingroup
7934       \c@footnote #1\relax
7935       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7936     \endgroup
7937     \H@@footnotemark
7938   }%
7939   \let\H@@mpfootnotetext\@mpfootnotetext
7940   \long\def\@mpfootnotetext#1{%
7941     \H@@mpfootnotetext{%
7942       \ifHy@nesting
7943         \expandafter\ltx@firstoftwo
7944       \else
7945         \expandafter\ltx@secondoftwo
7946       \fi
7947     }{%
7948       \expandafter\hyper@@anchor\expandafter{%
7949         \Hy@footnote@currentHref
7950       }\ignorespaces #1}%
7951     }{%
7952       \Hy@raisedlink{%
7953         \expandafter\hyper@@anchor\expandafter{%
7954           \Hy@footnote@currentHref
7955         }\relax}%
7956       }\ignorespaces #1%
7957     }%
7958   }%
7959 }%
7960 \long\def\@footnotetext#1{%
7961   \H@@footnotetext{%
7962     \ifHy@nesting
7963       \expandafter\ltx@firstoftwo
7964     \else
7965       \expandafter\ltx@secondoftwo
7966     \fi
7967   }{%
7968     \expandafter\hyper@@anchor\expandafter{%
7969       \Hy@footnote@currentHref
7970     }\ignorespaces #1}%
7971   }{%
7972     \Hy@raisedlink{%
7973       \expandafter\hyper@@anchor\expandafter{%

```

```

7974      \Hy@footnote@currentHref
7975      }{\relax}%
7976    }%
7977    \let\@currentHref\Hy@footnote@currentHref
7978    \let\@currentlabelname\@empty
7979    \ignorespaces #1%
7980  }%
7981 }%
7982 }%

```

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.

```

7983 \def\@footnotemark{%
7984   \leavevmode
7985   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7986   \stepcounter{Hfootnote}%
7987   \global\let\Hy@saved@currentHref\@currentHref
7988   \hyper@makecurrent{Hfootnote}%
7989   \global\let\Hy@footnote@currentHref\@currentHref
7990   \global\let\@currentHref\Hy@saved@currentHref
7991   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7992   \@makefnmark
7993   \hyper@linkend
7994   \ifhmode\spacefactor\@x@sf\fi
7995   \relax
7996 }%

```

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

```

7997 \ifpackageloaded{tabularx}{%
7998   \let\HyOrg@TX@endtabularx\TX@endtabularx
7999   \def\Hy@tabularx@hook{%
8000     \let\@footnotetext\H@@footnotetext
8001     \let\@footnotemark\H@@footnotemark
8002     \let\@mpfootnotetext\H@@mpfootnotetext
8003   }%
8004   \begingroup
8005     \toks@\expandafter{\TX@endtabularx}%
8006     \xdef\Hy@gtemp{%
8007       \noexpand\Hy@tabularx@hook
8008       \the\toks@
8009     }%
8010   \endgroup
8011   \let\TX@endtabularx\Hy@gtemp
8012 }{}%

```

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

```

8013 \ifpackageloaded{longtable}{%
8014   \CheckCommand*{\LT@p@ftntext}[1]{%
8015     \edef\@tempa{%
8016       \the\LT@p@ftn
8017       \noexpand\footnotetext[\the\c@footnote]%

```

```

8018 }%
8019 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
8020 }%
8021 \long\def\LT@p@ftntext#1{%
8022 \edef\@tempa{%
8023 \the\LT@p@ftn
8024 \begingroup
8025 \noexpand\c@footnote=\the\c@footnote\relax
8026 \noexpand\protected@xdef\noexpand\@thefnmark{%
8027 \noexpand\thempfn
8028 }%
8029 \noexpand\Hy@LT@footnotetext{%
8030 \Hy@footnote@currentHref
8031 }%
8032 }%
8033 \global\LT@p@ftn\expandafter{%
8034 \@tempa{#1}%
8035 \endgroup
8036 }%
8037 }%
8038 \long\def\Hy@LT@footnotetext#1#2{%
8039 \H@@@footnotetext{%
8040 \ifHy@nesting
8041 \hyper@@anchor{#1}{#2}%
8042 \else
8043 \Hy@raisedlink{%
8044 \hyper@@anchor{#1}{\relax}%
8045 }%
8046 \def\@currentHref{#1}%
8047 \let\@currentlabelname\@empty
8048 #2%
8049 \fi
8050 }%
8051 }%
8052 }{}%

```

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

```

8053 \@ifpackageloaded{fancyvrb}{%
8054 \def\V@@@footnotetext{%
8055 \insert\footins\bgroup
8056 \c@footnote reset\font\endcsname
8057 \footnotesize
8058 \interlinepenalty\interfootnotelinepenalty
8059 \splittopskip\footnotesep
8060 \splitmaxdepth\dp\strutbox
8061 \floatingpenalty \@MM
8062 \hsize\columnwidth
8063 \@parboxrestore
8064 \edef\@currentlabel{\c@footnote p\footnote\endcsname\@thefnmark}%
8065 \@makefnmark}%
8066 \rule{\z@}{\footnotesep}%
8067 \bgroup
8068 \aftergroup\V@@@footnotetext
8069 \Hy@raisedlink{%
8070 \expandafter\hyper@@anchor\expandafter{%
8071 \Hy@footnote@currentHref
8072 }\relax}%
8073 }%

```

```

8074 \let\@currentHref\Hy@footnote@currentHref
8075 \let\@currentlabelname\@empty
8076 \ignorespaces
8077 }%
8078 }{}%

```

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

```

8079 \def\Hy@temp#1{%
8080 \begingroup
8081 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8082 \endgroup
8083 \@footnotemark
8084 }%
8085 \ifx\Hy@temp\footref
8086 \def\footref#1{%
8087 \begingroup
8088 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8089 \endgroup
8090 \H@@@footnotemark
8091 }%
8092 \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.

```

8093 \let\HyOrg@maketitle\maketitle
8094 \def\maketitle{%
8095 \let\Hy@saved@footnotemark\@footnotemark
8096 \let\Hy@saved@footnotetext\@footnotetext
8097 \let\@footnotemark\H@@@footnotemark
8098 \let\@footnotetext\H@@@footnotetext
8099 \@ifnextchar[\Hy@maketitle@optarg{% ]
8100 \HyOrg@maketitle
8101 \Hy@maketitle@end
8102 }%
8103 }%
8104 \def\Hy@maketitle@optarg[#1]{%
8105 \HyOrg@maketitle[{#1}]%
8106 \Hy@maketitle@end
8107 }%
8108 \def\Hy@maketitle@end{%
8109 \ifx\@footnotemark\H@@@footnotemark
8110 \let\@footnotemark\Hy@saved@footnotemark
8111 \fi
8112 \ifx\@footnotetext\H@@@footnotetext
8113 \let\@footnotetext\Hy@saved@footnotetext
8114 \fi
8115 }%

```

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

```

8116 \def\realfootnote{%
8117 \@ifnextchar[\@xfootnote{%
8118 \stepcounter{\@mpfn}%
8119 \protected@xdef\@thefnmark{\thempfn}%
8120 \H@@@footnotemark\H@@@footnotetext
8121 }%
8122 }%

```



```

8123 \fi
8124 \Hy@DisableOption{hyperfootnotes}

8125 \</package>
8126 \< *check>
8127 \checklatex
8128 \checkcommand\def\@xfootnotenext[#1]{%
8129   \begingroup
8130     \csname c@\@mpfn\endcsname #1\relax
8131     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8132   \endgroup
8133   \@footnotetext
8134 }
8135 \checkcommand\def\@xfootnotemark[#1]{%
8136   \begingroup
8137     \c@footnote #1\relax
8138     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8139   \endgroup
8140   \@footnotemark
8141 }
8142 \checkcommand\def\@footnotemark{%
8143   \leavevmode
8144   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8145   \@makefnmark
8146   \ifhmode\spacefactor\@x@sf\fi
8147   \relax
8148 }
8149 \</check>
8150 \< *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.

```

8151 \def\caption{%
8152   \ifx\@captype\@undefined
8153     \@latex@error{\noexpand\caption outside float}\@ehd
8154     \expandafter\@gobble
8155   \else
8156     \H@refstepcounter\@captype
8157     \let\Hy@tempa\@caption
8158     \@ifundefined{float@caption}{%
8159       }{%
8160         \expandafter\ifx\csname @float@c@\@captype\endcsname
8161           \float@caption
8162         \let\Hy@tempa\Hy@float@caption
8163       \fi
8164     }%
8165     \expandafter\@firstofone
8166   \fi
8167   {\@dblarg{\Hy@tempa\@captype}}}%
8168 }
8169 \long\def\@caption#1[#2]#3{%
8170   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8171     \csname iftrue\endcsname
8172     \global\let\@currentHref\hc@currentHref

```

```

8173 \else
8174   \hyper@makecurrent{\@captype}%
8175 \fi
8176 \@ifundefined{NR@getttitle}{%
8177   \def\@currentlabelname{#2}%
8178 }{%
8179   \NR@getttitle{#2}%
8180 }%
8181 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8182   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8183 }%
8184 \begingroup
8185   \@parboxrestore
8186   \if@minipage
8187     \setminipage
8188   \fi
8189   \normalsize
8190   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8191     \csname iftrue\endcsname
8192   \global\@capstartfalse
8193   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8194 \else
8195   \@makecaption{\csname fnum@#1\endcsname}{%
8196     \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8197   \ifHy@nesting
8198     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8199   \else
8200     \Hy@raisedlink{%
8201       \expandafter\hyper@@anchor\expandafter{%
8202         \@currentHref
8203       }\relax}%
8204     }%
8205     #3%
8206   \fi
8207 }%
8208 \fi
8209 \par
8210 \endgroup
8211 }

```

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’.

```

8212 \let\Hy@float@caption\@caption
8213 \newcommand{\HyNew@float@makebox}[1]{%
8214   \HyOrg@float@makebox{%
8215     #1\relax
8216     \ifx\Hy@float@currentHref\@undefined
8217     \else
8218       \expandafter\hyper@@anchor\expandafter{%
8219         \Hy@float@currentHref
8220       }\relax}%
8221     \global\let\Hy@float@currentHref\@undefined
8222   \fi

```

```

8223 }%
8224 }%
8225 \@ifpackageloaded{float}{%
8226   \def\Hy@float@caption{%
8227     \ifx\Hy@float@currentHref\undefined
8228       \hyper@makecurrent{\@cuptype}%
8229       \global\let\Hy@float@currentHref\@currentHref
8230     \else
8231       \let\@currentHref\Hy@float@currentHref
8232     \fi
8233   \float@caption
8234 }%
8235 \let\HyOrg@float@makebox\float@makebox
8236 \let\float@makebox\HyNew@float@makebox
8237 }{}

8238 \</package>
8239 \< *check>
8240 \checklatex[1999/06/01 - 2000/06/01]
8241 \checkcommand\def\caption{%
8242   \ifx\@cuptype\undefined
8243     \@latex@error{\noexpand\caption outside float}\@ehd
8244     \expandafter\@gobble
8245   \else
8246     \refstepcounter\@cuptype
8247     \expandafter\@firstofone
8248   \fi
8249   {\@dblarg{\@caption\@cuptype}}%
8250 }
8251 \checkcommand\long\def\@caption#1[#2]#3{%
8252   \par
8253   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8254     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8255   }%
8256   \begingroup
8257     \@parboxrestore
8258     \if@minipage
8259       \setminipage
8260     \fi
8261     \normalsize
8262     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8263   \endgroup
8264 }
8265 \< /check>
8266 \< *package>

```

38 Bibliographic references

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

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

```

8267 \def\hyper@natlinkstart#1{%
8268   \Hy@backout{#1}%
8269   \hyper@linkstart{cite}{cite.#1}%
8270   \def\hyper@nat@current{#1}%
8271 }
8272 \def\hyper@natlinkend{%
8273   \hyper@linkend
8274 }
8275 \def\hyper@natlinkbreak#1#2{%
8276   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8277 }
8278 \def\hyper@natanchorstart#1{%
8279   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8280 }
8281 \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.

```

8282 \let\@ifundefined{NAT@parse}{%
8283   \providecommand*\@extra@binfo{}%
8284   \providecommand*\@extra@b@citeb{}%
8285   \def\bibcite#1#2{%
8286     \@newl@bel{b}{#1\@extra@binfo}%
8287     \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8288   }%
8289 }%
8290 \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.”.

```

8291 \let\Hy@bibcite\bibcite
8292 \begingroup
8293   \@ifundefined{bbl@cite@choice}{}{%
8294     \g@addto@macro\bbl@cite@choice{%
8295       \let\bibcite\Hy@bibcite
8296     }%
8297   }%
8298 \endgroup

```

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

```

8299 \providecommand*\@BIBLABEL{\@biblabel}%
8300 \def\@bibitem[#1]#2{%
8301   \@skiphyperrtrue
8302   \H@item[%
8303     \ifx\Hy@raisedlink\@empty
8304       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8305       \@BIBLABEL{#1}%
8306       \hyper@anchorend
8307     \else
8308       \Hy@raisedlink{%
8309         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8310       }%
8311       \@BIBLABEL{#1}%
8312     \fi
8313     \hfill
8314   ]%

```

```

8315 \@skiphyperreffalse
8316 \if@filesw
8317 \begingroup
8318 \let\protect\noexpand
8319 \immediate\write\@auxout{%
8320 \string\bibcite{#2}{#1}%
8321 }%
8322 \endgroup
8323 \fi
8324 \ignorespaces
8325 }%

```

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

```

8326 \def\@bibitem#1{%
8327 \@skiphyperrefftrue\H@item\@skiphyperreffalse
8328 \Hy@raisedlink{%
8329 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8330 }%
8331 \if@filesw
8332 \begingroup
8333 \let\protect\noexpand
8334 \immediate\write\@auxout{%
8335 \string\bibcite{#1}{\the\value{\@listctr}}}%
8336 }%
8337 \endgroup
8338 \fi
8339 \ignorespaces
8340 }%
8341 }{}

8342 \</package>
8343 \< *check>
8344 \checklatex
8345 \checkcommand\def\@lbibitem[#1]#2{%
8346 \item[\@biblabel{#1}\hfill]%
8347 \if@filesw
8348 {%
8349 \let\protect\noexpand
8350 \immediate\write\@auxout{%
8351 \string\bibcite{#2}{#1}%
8352 }%
8353 }%
8354 \fi
8355 \ignorespaces
8356 }
8357 \checkcommand\def\@bibitem#1{%
8358 \item
8359 \if@filesw
8360 \immediate\write\@auxout{%
8361 \string\bibcite{#1}{\the\value{\@listctr}}}%
8362 }%
8363 \fi
8364 \ignorespaces
8365 }
8366 \</check>
8367 \< *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.

```

8368 \ifclassloaded{revtex}{}%
8369 \Hy@Info{*** compatibility with revtex **** }%
8370 \def\revtex@checking#1#2{%
8371   \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8372   \expandafter\def\csname b@#1\endcsname{#2}%
8373   \@SetMaxRnhefLabel{#1}%
8374   \expandafter\let\csname b@#1\endcsname\T@temp
8375 }%

```

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

```

8376 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8377 \providecommand*{\@extra@b@citeb}{}%
8378 \def\CITE[#1]#2{%
8379   \let\@citea\@empty
8380   \leavevmode
8381   \unskip
8382   $\{
8383   \scriptstyle
8384   \@CITE{%
8385     \@for\@citeb:=#2\do{%
8386       \@citea
8387       \def\@citea{\penalty\@m }%
8388       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8389       \if@filesw
8390         \immediate\write\@auxout{\string\citation{\@citeb}}%
8391       \fi
8392       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8393       \mbox{\reset@font\bfseries ?}%
8394       \G@refundefinedtrue
8395       \@latex@warning{%
8396         Citation '\@citeb' on page \thepage \space undefined%
8397       }%
8398     }%
8399     {\csname b@\@citeb\extra@b@citeb\endcsname}%
8400   }%
8401 }%
8402 }{#1}%
8403 }$%
8404 }%

```

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.

```

8405 \def\@citex[#1]#2{%
8406   \let\@citea\@empty
8407   \@cite{%
8408     \@for\@citeb:=#2\do{%
8409       \@citea
8410       \def\@citea{\penalty\@m }%
8411       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8412       \if@filesw
8413         \immediate\write\@auxout{\string\citation{\@citeb}}%
8414       \fi
8415       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8416       \mbox{\reset@font\bfseries ?}%
8417       \G@refundefinedtrue

```

```

8418      \@latex@warning{%
8419          Citation `\'@citeb' on page \thepage \space undefined%
8420      }%
8421  }{%
8422      \hbox{\csname b@\'@citeb\@extra@b@citeb\endcsname}%
8423  }%
8424  }%
8425  }{#1}%
8426 }%
8427 }{}

```

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.

```

8428 \@ifpackageloaded{harvard}{%
8429   \Hy@AtBeginDocument{%
8430     \Hy@Info{*** compatibility with harvard **** }%
8431     \Hy@raiselinksfalse
8432     \def\harvardcite#1#2#3#4{%
8433       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
8434       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
8435       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
8436       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8437     }%
8438     \def\HAR@citetoaux#1{%
8439       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8440       \ifHy@backref
8441         \ifx\@empty\@currentlabel
8442           \else
8443             \@bsphack
8444             \if@filesw
8445               \protected@write\@auxout{}{%
8446                 \string\@writefile{brf}{%
8447                   \string\backcite{#1}{%
8448                     {\thepage}{\@currentlabel}{\@currentHref}%
8449                   }%
8450                 }%
8451             }%
8452           \fi
8453           \@esphack
8454         \fi
8455       \fi
8456     }%
8457     \def\harvarditem{%
8458       \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8459     }%
8460     \def\@harvarditem[#1]#2#3#4#5\par{%
8461       \item[]%
8462       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8463       \if@filesw

```

```

8464 \begingroup
8465 \def\protect##1{\string ##1\space}%
8466 \ifthenelse{\equal{#1}{\null}}{%
8467   {\def\next{{#4}{#2}{#2}{#3}}}%
8468   {\def\next{{#4}{#2}{#1}{#3}}}%
8469 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8470 \endgroup
8471 \fi
8472 \protect\hspace*{-\labelwidth}%
8473 \protect\hspace*{-\labelsep}%
8474 \ignorespaces
8475 #5%
8476 \ifHy@backref
8477 \newblock
8478 \backref{\csname br@#4\endcsname}%
8479 \fi
8480 \par
8481 }%

```

`\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`:

```

8482 \long\def\HAR@checkcitations#1#2#3#4{%
8483 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8484 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8485 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8486 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8487 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8488 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8489 \else
8490 \@tempswatrue
8491 \fi
8492 \else
8493 \@tempswatrue
8494 \fi
8495 \else
8496 \@tempswatrue
8497 \fi
8498 }%
8499 }%

8500 {}

```

38.2 Package chicago

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

```

8501 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

8502 \def\citeN{%
8503 \def\@citesep{~}{-1000}}%
8504 \def\cite##1##2{##1}%
8505 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8506 \@citedata@opt
8507 }%

```


\shortciteN

```

8508 \def\shortciteN{%
8509   \def\@citesep{~1000}%
8510   \def\@cite##1##2{##1}%
8511   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8512   \@citedata@opt
8513 }%

```

\@citedata@opt

```

8514 \def\@citedata@opt{%
8515   \let\@cite@opt\@empty
8516   \@ifnextchar [{%
8517     \@tempswatrue
8518     \@citedatax@opt
8519   }{%
8520     \@tempswafalse
8521     \@citedatax[]%
8522   }%
8523 }%

```

\@citedatax@opt

```

8524 \def\@citedatax@opt[#1]{%
8525   \def\@cite@opt{, #1}%
8526   \@citedatax[{#1}]%
8527 }%
8528 }{}

```

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{pdf-pageduration={}}`. 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.

```

8529 \ltx@ifclassloaded{slides}{%
8530   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8531   \def\Hy@PageAnchorSlidesPlain{%
8532     \advance\c@page\ltx@one
8533     \edef\Hy@TempPageAnchor{%
8534       \noexpand\hyper@{#1}%
8535       page.\the\c@slide.\the\c@overlay.\the\c@note%
8536       \ifnum\c@page=\ltx@one
8537         \else
8538         .\the\c@page
8539       \fi
8540     }%
8541   }%
8542   \advance\c@page-\ltx@one
8543 }%
8544 \def\Hy@PageAnchorSlide{%
8545   \advance\c@page\ltx@one
8546   \ifnum\c@page>\ltx@one
8547     \ltx@ifundefined{theHpage}{%
8548       \protected@edef\Hy@TheSlideOptionalPage{%

```

```

8549     \Hy@SlidesFormatOptionalPage{\thepage}%
8550 }%
8551 }{%
8552     \protected@edef\Hy@TheSlideOptionalPage{%
8553         \Hy@SlidesFormatOptionalPage{\theHpage}%
8554     }%
8555 }%
8556 \else
8557     \def\Hy@TheSlideOptionalPage{}%
8558 \fi
8559 \advance\c@page-\ltx@one
8560 \pdfstringdef\@the@H@page{%
8561     \csname
8562         the%
8563         \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8564         \Hy@SlidesPage
8565     \endcsname
8566     \Hy@TheSlideOptionalPage
8567 }%
8568 \ltx@gobblethree
8569 }%
8570 \def\Hy@SlidesPage{slide}%
8571 \g@addto@macro\slide{%
8572     \def\Hy@SlidesPage{slide}%
8573 }%
8574 \g@addto@macro\overlay{%
8575     \def\Hy@SlidesPage{overlay}%
8576 }%
8577 \g@addto@macro\note{%
8578     \def\Hy@SlidesPage{note}%
8579 }%
8580 }{%
8581     \def\Hy@PageAnchorSlidesPlain{}%
8582     \def\Hy@PageAnchorSlide{}%
8583 }
8584 \def\Hy@EveryPageAnchor{%
8585     \Hy@DistillerDestFix
8586     \ifHy@pageanchor
8587         \ifHy@hypertextnames
8588             \ifHy@plainpages
8589                 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8590                 \Hy@PageAnchorSlidesPlain
8591             \else
8592                 \begingroup
8593                     \let\@number\@firstofone
8594                     \Hy@unicodedefalse
8595                     \Hy@PageAnchorSlide
8596                     \pdfstringdef\@the@H@page{\thepage}%
8597                 \endgroup
8598                 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8599                 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8600             \fi
8601         \else
8602             \Hy@GlobalStepCount\Hy@pagecounter
8603             \def\Hy@TempPageAnchor{%
8604                 \hyper@@anchor{page.\the\Hy@pagecounter}%
8605             }%

```

```

8606 \fi
8607 \vbox to 0pt{%
8608   \kern\voffset
8609   \kern\topmargin
8610   \kern-1bp\relax
8611   \hbox to 0pt{%
8612     \kern\hoffset
8613     \kern\ifodd\value{page}%
8614       \oddsidemargin
8615     \else
8616       \evensidemargin
8617     \fi
8618     \kern-1bp\relax
8619     \Hy@TempPageAnchor\relax
8620     \hss
8621   }%
8622   \vss
8623 }%
8624 \fi
8625 }
8626 \g@addto@macro\Hy@EveryPageBoxHook{%
8627   \Hy@EveryPageAnchor
8628 }

```

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.

```

8629 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8630 % line in the \textt{toc}file.
8631 % \begin{macrocode}
8632 \providecommand\protected@file@percent{}
8633 \def\addcontentsline#1#2#3{% toc extension, type, tag
8634   \begingroup
8635     \let\label\@gobble
8636     \ifx\@currentHref\@empty
8637       \Hy@Warning{%
8638         No destination for bookmark of \string\addcontentsline,%
8639         \MessageBreak destination is added%
8640       }%
8641     \phantomsection
8642   \fi
8643   \expandafter\ifx\csname toplevel@#2\endcsname\relax
8644     \begingroup
8645       \def\Hy@tempa{#1}%
8646       \ifx\Hy@tempa\Hy@bookmarkstype
8647         \Hy@WarningNoLine{%
8648           bookmark level for unknown #2 defaults to 0%
8649         }%
8650       \else
8651         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8652       \fi
8653     \endgroup
8654   \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8655   \fi

```

```

8656 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8657 \Hy@writebookmark{\csname the#2\endcsname}%
8658   {#3}%
8659   {\@currentHref}%
8660   {\Hy@toclevel}%
8661   {#1}%
8662 \ifHy@verbose
8663   \begingroup
8664     \def\Hy@tempa{#3}%
8665     \@onelevel@sanitize\Hy@tempa
8666     \let\temp@online\on@line
8667     \let\on@line\@empty
8668     \Hy@Info{%
8669       bookmark\temp@online:\MessageBreak
8670       thecounter {\csname the#2\endcsname}\MessageBreak
8671       text {\Hy@tempa}\MessageBreak
8672       reference {\@currentHref}\MessageBreak
8673       toplevel {\Hy@toclevel}\MessageBreak
8674       type {#1}%
8675     }%
8676   \endgroup
8677 \fi
8678 \addtocontents{#1}{%
8679 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8680 }%
8681 \endgroup
8682 }

```

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

```

8683 \def\contentsline#1#2#3#4{%
8684   \begingroup
8685   \Hy@safe@activertrue
8686   \edef\x{\endgroup
8687     \def\noexpand\Hy@tocdestname{#4}%
8688   }\x
8689   \ifx\Hy@tocdestname\ltx@empty
8690     \csname l@#1\endcsname{#2}{#3}%
8691   \else
8692     \ifcase\Hy@linktoc % none
8693       \csname l@#1\endcsname{#2}{#3}%
8694     \or % section
8695       \csname l@#1\endcsname{%
8696         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8697       }{#3}%
8698     \or % page
8699       \def\Hy@temp{#3}%
8700       \ifx\Hy@temp\ltx@empty
8701         \csname l@#1\endcsname{#2}{#3}%
8702       \else
8703         \csname l@#1\endcsname{{#2}}{%
8704           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8705         }%
8706       \fi
8707     \else % all
8708       \def\Hy@temp{#3}%

```

```

8709 \ifx\Hy@temp\ltx@empty
8710 \csname l@#1\endcsname{%
8711 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8712 }{}%
8713 \else
8714 \csname l@#1\endcsname{%
8715 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8716 }{%
8717 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8718 }%
8719 \fi
8720 \fi
8721 \fi
8722 }

8723 \</package>
8724 \<*check>
8725 \checklatex
8726 \checkcommand\def\addcontentsline#1#2#3{%
8727 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8728 }
8729 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8730 \</check>
8731 \<*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.

```

8732 \let\H@definecounter\@definecounter
8733 \def\@definecounter#1{%
8734 \H@definecounter{#1}%
8735 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8736 }

```

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.

```

8737 \let\H@newctr\@newctr
8738 \def\@newctr#1[#2]{%
8739 \H@newctr#1[#2]%
8740 \expandafter\gdef\csname theH#1\endcsname{%
8741 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8742 }%
8743 }

```

42 AMSI^AT_EX 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.

```

8744 \<@ifpackageloaded{amsmath}{%
8745 \def\Hy@make@anchor{%

```

```

8746 \Hy@MakeCurrentHrefAuto{AMS}%
8747 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8748 }%
8749 \def\Hy@make@df@tag@@#1{%
8750 \gdef\df@tag{%
8751 \maketag@@@{\Hy@make@anchor#1}%
8752 \def\@currentlabel{#1}%
8753 }%
8754 }%
8755 \def\Hy@make@df@tag@@@#1{%
8756 \gdef\df@tag{%
8757 \tagform@{\Hy@make@anchor#1}%
8758 \toks@{\xp{p@equation{#1}}}%
8759 \edef\@currentlabel{\the\toks@}%
8760 }%
8761 }%
8762 \let\HyOrg@make@df@tag@@\make@df@tag@@
8763 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8764 \let\make@df@tag@@\Hy@make@df@tag@@
8765 \let\make@df@tag@@@\Hy@make@df@tag@@@
8766 }-}

```

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

```

8767 \@ifpackagewith{hyperref}{pdftex}{%
8768 \let\H@seteqlabel\@seteqlabel
8769 \def\@seteqlabel#1{%
8770 \H@seteqlabel{#1}%
8771 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8772 \Hy@raisedlink{%
8773 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8774 }%
8775 }%
8776 }-}

```

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.

```

8777 \let\HyOrg@addtoreset\@addtoreset
8778 \def\@addtoreset#1#2{%
8779 \HyOrg@addtoreset{#1}{#2}%
8780 \expandafter\xdef\csname theH#1\endcsname{%
8781 \expandafter\noexpand
8782 \csname the\@ifundefined{theH#2}{ }H#2\endcsname
8783 .\noexpand\the\noexpand\value{#1}%

```

```

8784 }%
8785 }

```

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

```

8786 </package>
8787 <*check>
8788 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8789 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8790   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8791     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8792       \@addtoreset{#2}{#3}%
8793       \@xp\xdef\csname the#2\endcsname{%
8794         \@xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8795       }%
8796     }%
8797   }%
8798 }%
8799 </check>
8800 <*package>
8801 \@ifpackageloaded{amsmath}{%
8802   \@ifpackagelater{amsmath}{1999/12/14}{%
8803     \renewcommand*{\numberwithin}[3][\arabic]{%
8804       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8805         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8806           \HyOrg@addtoreset{#2}{#3}%
8807           \@xp\xdef\csname the#2\endcsname{%
8808             \@xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8809           }%
8810           \@xp\xdef\csname theH#2\endcsname{%
8811             \@xp\@nx
8812             \csname the\@ifundefined{theH#3}{H#3\endcsname
8813             .\@nx#1{#2}%
8814           }%
8815         }%
8816       }%
8817     }%
8818   }{%
8819     \Hy@WarningNoLine{%
8820       \string\numberwithin\space of package `amsmath' %
8821       only fixed\MessageBreak
8822       for version 2000/06/06 v2.12 or newer%
8823     }%
8824   }%
8825 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8826 \ifHy@hyperfigures
8827   \let\Hy@Gin@setfile\Gin@setfile
8828   \def\Gin@setfile#1#2#3{%
8829     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8830   }%
8831 \fi
8832 \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.

```

8833 \ifHy@hyperindex
8834   \def\HyInd@ParenLeft{({}%
8835   \def\HyInd@ParenRight{)}}%
8836   \def\hyperindexformat#1#2{%
8837     \let\HyOrg@hyperpage\hyperpage
8838     \let\hyperpage\@firstofone
8839     #1{\HyOrg@hyperpage{#2}}}%
8840   \let\hyperpage\HyOrg@hyperpage
8841 }%
8842 \Hy@nextfalse
8843 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8844 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8845 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8846 \begingroup
8847   \lccode`\|=\expandafter`\HyInd@EncapChar\relax
8848   \lccode`\/=\|\|\relax
8849 \lowercase{\endgroup
8850   \ifHy@next
8851     \let\HyInd@org@wrindex\@wrindex
8852     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\|}%
8853     \def\HyInd@@wrindex#1#2|#3|#4\|{%
8854       \ifx\|#3\|
8855         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8856       \else
8857         \HyInd@@@wrindex{#1}{#2}#3\|
8858       \fi
8859     }%
8860     \def\HyInd@@@wrindex#1#2#3#4\|{%
8861       \def\Hy@temp@A{#3}%
8862       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8863         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8864       \relax
8865       \HyInd@org@wrindex{#1}{%
8866         #2|hyperindexformat{/#3#4}%
8867       }%
8868     \else
8869       \ifx\|#4\|
8870         \ifx\Hy@temp@A\HyInd@ParenRight
8871           \HyInd@org@wrindex{#1}{#2|#3}%
8872         \else
8873           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8874         \fi
8875       \else
8876         \HyInd@org@wrindex{#1}{%
8877           #2|#3hyperindexformat{/#4}%

```



```

8878     }%
8879     \fi
8880   \fi
8881 }%
8882 \else
8883 \def\@wrindex#1{\@@wrindex#1||\}%
8884 \def\@@wrindex#1|#2|#3\{\%
8885 \if@filesw
8886 \ifx\|#2\%
8887 \protected@write\@indexfile{\%
8888 \string\indexentry{#1|hyperpage}{\thepage}%
8889 }%
8890 \else
8891 \HyInd@@@wrindex{#1}#2\%
8892 \fi
8893 \fi
8894 \endgroup
8895 \@esphack
8896 }%
8897 \def\HyInd@@@wrindex#1#2#3\{\%
8898 \def\Hy@temp@A{#2}%
8899 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8900 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8901 \relax
8902 \protected@write\@indexfile{\%
8903 \string\indexentry{%
8904 #1|hyperindexformat{/#2#3}%
8905 }{\thepage}%
8906 }%
8907 \else
8908 \ifx\|#3\%
8909 \ifx\Hy@temp@A\HyInd@ParenRight
8910 \HyInd@DefKey{#1}%
8911 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8912 \let\Hy@temp\ltx@empty
8913 }{\%
8914 \expandafter\let\expandafter\Hy@temp
8915 \csname HyInd@(\HyInd@key)\endcsname
8916 }%
8917 \protected@write\@indexfile{\%
8918 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8919 }%
8920 \else
8921 \protected@write\@indexfile{\%
8922 \string\indexentry{#1|#2hyperpage}{\thepage}%
8923 }%
8924 \HyInd@DefKey{#1}%
8925 \expandafter
8926 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8927 hyperpage%
8928 }%
8929 \fi
8930 \else
8931 \protected@write\@indexfile{\%
8932 \string\indexentry{%
8933 #1|#2hyperindexformat{/#3}%
8934 }{\thepage}%

```

```

8935     }%
8936     \ifx\Hy@temp@A\HyInd@ParenLeft
8937       \HyInd@DefKey{#1}%
8938       \expandafter
8939       \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8940         hyperindexformat{/#3}%
8941       }%
8942     \fi
8943   \fi
8944 \fi
8945 }%
8946 \def\HyInd@DefKey#1{%
8947   \begingroup
8948   \let\protect\@unexpandable@protect
8949   \edef\Hy@temp{#1}%
8950   \ltx@onelevel@sanitize\Hy@temp
8951   \global\let\HyInd@key\Hy@temp
8952   \endgroup
8953 }%
8954 \fi
8955 }%
8956 \fi
8957 \Hy@DisableOption{hyperindex}
8958 \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.

```

8959 \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.

```

8960 \def\hyperpage#1{%
8961   \HyInd@hyperpage#1\nohyperpage{}\@nil
8962 }
8963 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8964   \HyInd@@hyperpage{#1}%
8965   #2%
8966   \def\Hy@temp{#3}%
8967   \ifx\Hy@temp\@empty
8968   \else
8969     \ltx@ReturnAfterFi{%
8970       \HyInd@hyperpage#3\@nil
8971     }%
8972   \fi
8973 }
8974 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
8975 \def\@hyperpage#1--#2--#3\{\%
8976   \ifx\#2\%
8977     \@commahyperpage{#1}%
8978   \else
8979     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8980   \fi
8981 }
8982 \def\@commahyperpage#1{\@commahyperpage#1, \}
8983 \def\@commahyperpage#1, #2,#3\{\%
8984   \ifx\#2\%
8985     \HyInd@pagelink{#1}%

```

```

8986 \else
8987   \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8988 \fi
8989 }

```

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

```

8990 \def\HyInd@pagelink#1{%
8991   \begingroup
8992   \toks@={}%
8993   \HyInd@removespaces#1 \@nil
8994   \endgroup
8995 }
8996 \def\HyInd@removespaces#1 #2\@nil{%
8997   \toks@=\expandafter{\the\toks@#1}%
8998   \ifx\#2\%
8999     \edef\x{\the\toks@}%
9000     \ifx\x\@empty
9001       \else
9002         \hyperlink{page.\the\toks@}{\the\toks@}%
9003       \fi
9004     \else
9005       \ltx@ReturnAfterFi{%
9006         \HyInd@removespaces#2\@nil
9007       }%
9008     \fi
9009 }

```

45 Compatibility with foiltex

```

9010 \@ifclassloaded{foils}{%
9011   \providecommand*{ext@table}{lot}%
9012   \providecommand*{ext@figure}{lof}%
9013 }{}

```

46 Compatibility with seminar slide package

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

```

9014 \@ifclassloaded{seminar}{%
9015   \Hy@seminarslidestrue
9016   \providecommand\theHslide{\arabic{slide}}%
9017 }{%
9018   \Hy@seminarslidesfalse
9019 }
9020 \@ifpackageloaded{slidesec}{%
9021   \providecommand\theHslidesection {\arabic{slidesection}}%
9022   \providecommand\theHslidesubsection{%
9023     \theHslidesection.\arabic{slidesubsection}}%
9024   }%
9025   \def\slide@heading[#1]#2{%
9026     \H@refstepcounter{slidesection}%
9027     \@addtoreset{slidesubsection}{slidesection}%
9028     \addtocontents{los}{%
9029       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
9030       {\@SCTR}{slideheading.\theslidesection}}%

```

```

9031 }%
9032 \def\Hy@tempa{#2}%
9033 \ifx\Hy@tempa\@empty
9034 \else
9035 {%
9036   \edef\@currentlabel{%
9037     \csname p@slidesection\endcsname\theslidesection
9038   }%
9039   \makeslideheading{#2}%
9040 }%
9041 \fi
9042 \gdef\theslideheading{#1}%
9043 \gdef\theslidesubheading{}%
9044 \ifHy@bookmarksnumbered
9045   \def\Hy@slidetitle{\theslidesection\space #1}%
9046 \else
9047   \def\Hy@slidetitle{#1}%
9048 \fi
9049 \ifHy@hypertextnames
9050   \ifHy@naturalnames
9051     \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9052     \Hy@writebookmark
9053       {\theslidesection}%
9054       {\Hy@slidetitle}%
9055       {slideheading.\theslidesection}%
9056       {1}%
9057       {toc}%
9058   \else
9059     \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9060     \Hy@writebookmark
9061       {\theslidesection}%
9062       {\Hy@slidetitle}%
9063       {slideheading.\theHslidesection}%
9064       {1}%
9065       {toc}%
9066   \fi
9067 \else
9068   \Hy@GlobalStepCount\Hy@linkcounter
9069   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9070   \Hy@writebookmark
9071     {\theslidesection}%
9072     {\Hy@slidetitle}%
9073     {slideheading.\the\Hy@linkcounter}%
9074     {1}%
9075     {toc}%
9076   \fi
9077 }%
9078 \def\slide@subheading[#1]#2{%
9079   \H@refstepcounter{slidesubsection}%
9080   \addtocontents{los}{%
9081     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9082     {\@SCTR}{slideheading.\theslidesubsection}%
9083   }%
9084   \def\Hy@tempa{#2}%
9085   \ifx\Hy@tempa\@empty
9086   \else
9087     {%

```

```

9088     \edef\@currentlabel{%
9089         \csname p@slidessubsection\endcsname\theslidessubsection
9090     }%
9091     \makeslidesubheading{#2}%
9092 }%
9093 \fi
9094 \gdef\theslidesubheading{#1}%
9095 \ifHy@bookmarksnumbered
9096     \def\Hy@slidetitle{\theslidessubsection\space #1}%
9097 \else
9098     \def\Hy@slidetitle{#1}%
9099 \fi
9100 \ifHy@hypertextnames
9101     \ifHy@naturalnames
9102         \hyper@@anchor{slideheading.\theslidessubsection}{\relax}%
9103         \Hy@writebookmark
9104             {\theslidessubsection}%
9105             {\Hy@slidetitle}%
9106             {slideheading.\theslidessubsection}%
9107             {2}%
9108             {toc}%
9109     \else
9110         \hyper@@anchor{slideheading.\theHslidessubsection}{\relax}%
9111         \Hy@writebookmark
9112             {\theslidessubsection}%
9113             {\Hy@slidetitle}%
9114             {slideheading.\theHslidessubsection}%
9115             {2}%
9116             {toc}%
9117     \fi
9118 \else
9119     \Hy@GlobalStepCount\Hy@linkcounter
9120     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9121     \Hy@writebookmark
9122         {\theslidessubsection}%
9123         {\Hy@slidetitle}%
9124         {slideheading.\the\Hy@linkcounter}%
9125         {1}%
9126         {toc}%
9127 \fi
9128 }%
9129 \providecommand*\listslidenamelist{List of Slides}%
9130 \def\listofslides{%
9131     \section*{%
9132         \listslidenamelist
9133         \@mkboth{%
9134             \expandafter\MakeUppercase\listslidenamelist
9135         }{%
9136             \expandafter\MakeUppercase\listslidenamelist
9137         }%
9138     }%
9139     \def\l@slide##1##2##3##4{%
9140         \slide@undottedcline{%
9141             \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9142         }%
9143     }%
9144     \let\l@subslide\l@slide

```

```

9145 \startlos
9146 }%
9147 \def\slide@contents{%
9148 \def\l@slide##1##2##3##4{%
9149 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9150 }%
9151 \let\l@subslide\@gobblefour
9152 \startlos
9153 }%
9154 \def\Slide@contents{%
9155 \def\l@slide##1##2##3##4{%
9156 \ifcase\lslide@flag
9157 \message{##1 ** \the\c@slidesection}%
9158 \ifnum##1>\c@slidesection
9159 \def\lslide@flag{1}%
9160 {%
9161 \large
9162 \slide@cline{%
9163 \slidenumberline{$\Rightarrow\bullet$}%
9164 {\hyperlink{##4}{##2}}}%
9165 }{##3}%
9166 }%
9167 \else
9168 {%
9169 \large
9170 \slide@cline{%
9171 \slidenumberline{$\surd;$\bullet$}%
9172 {\hyperlink{##4}{##2}}}%
9173 }{##3}%
9174 }%
9175 \fi
9176 \or
9177 \def\lslide@flag{2}%
9178 {%
9179 \large
9180 \slide@cline{%
9181 \slidenumberline{$\bullet$}%
9182 {\hyperlink{##4}{##2}}}%
9183 }{##3}%
9184 }%
9185 \or
9186 {%
9187 \large
9188 \slide@cline{%
9189 \slidenumberline{$\bullet$}%
9190 {\hyperlink{##4}{##2}}}%
9191 }{##3}%
9192 }%
9193 \fi
9194 }%
9195 \def\l@subslide##1##2##3##4{%
9196 \ifnum\lslide@flag=1 %
9197 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}}%
9198 \fi
9199 }%
9200 \def\lslide@flag{0}%
9201 \startlos

```

```

9202 }%
9203 }{}

```

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.)

```

9204 \ifHy@texht
9205   \expandafter\endinput
9206 \fi
9207 \let\real@setref\@setref
9208 \def\@setref#1#2#3{% csname, extract group, refname
9209   \ifx#1\relax
9210     \protect\G@refundefinedtrue
9211     \nfss@text{\reset@font\bfseries ??}%
9212     \@latex@warning{%
9213       Reference `#3' on page \thepage \space undefined%
9214     }%
9215   \else
9216     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9217   \fi
9218 }

```

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

```

9219 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9220   \begingroup
9221     \toks0={\hyper@@link{#5}{#4}}%
9222     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9223   \edef\x{\endgroup
9224     \the\toks0 {\the\toks1 }%
9225   }%
9226   \x
9227 }
9228 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9229   \ifx#1\relax
9230     \protect\G@refundefinedtrue
9231     \nfss@text{\reset@font\bfseries ??}%
9232     \@latex@warning{%
9233       Reference `#3' on page \thepage \space undefined%
9234     }%
9235   \else
9236     \protect\hyper@@@link
9237     {\expandafter\@fifthoffive#1}%
9238     {page.\expandafter\@secondoffive#1}%
9239     {\expandafter\@secondoffive#1}%
9240   \fi
9241 }
9242 \</package>
9243 \< *check>
9244 \checklatex
9245 \checkcommand\def\@setref#1#2#3{%
9246   \ifx#1\relax
9247     \protect\G@refundefinedtrue
9248     \nfss@text{\reset@font\bfseries ??}%
9249     \@latex@warning{%
9250       Reference `#3' on page \thepage \space undefined%
9251     }%
9252   \else

```

```

9253 \expandafter#2#1\null
9254 \fi
9255 }
9256 </check>
9257 (*package)

```

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

```

9258 \def\HyRef@StarSetRef#1{%
9259 \begingroup
9260 \Hy@safe@activestruer
9261 \edef\x{#1}%
9262 \@onelevel@sanitize\x
9263 \edef\x{\endgroup
9264 \noexpand\HyRef@@StarSetRef
9265 \expandafter\noexpand\csname r@\x\endcsname{\x}%
9266 }%
9267 \x
9268 }
9269 \def\HyRef@@StarSetRef#1#2#3{%
9270 \ifx#1\@undefined
9271 \let#1\relax
9272 \fi
9273 \real@setref#1#3{#2}%
9274 }
9275 \def\@refstar#1{%
9276 \HyRef@StarSetRef{#1}\@firstoffive
9277 }
9278 \def\@pagerefstar#1{%
9279 \HyRef@StarSetRef{#1}\@secondoffive
9280 }
9281 \def\@namerefstar#1{%
9282 \HyRef@StarSetRef{#1}\@thirdoffive
9283 }
9284
9285 \Hy@AtBeginDocument{%
9286 \@ifpackageloaded{varioref}{%
9287 \def\@Refstar#1{%
9288 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9289 }%
9290 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9291 \MakeUppercase#1%
9292 }%
9293 \DeclareRobustCommand*\Ref*{%
9294 \@ifstar\@Refstar\HyRef@Ref
9295 }%
9296 \def\HyRef@Ref#1{%
9297 \hyperref[{#1}]{\Ref*{#1}}%
9298 }%

```

Test if we are running new 2019 varioref or old one:

```

9299 %FMi
9300 \ifdefined\vp@gerefstar
9301 \renewcommand\Vref@star[2][]{%
9302 \begingroup
9303 \let\T@pageref\@pagerefstar
9304 \Ref*{#2}
9305 \vpageref[#1]{#2}%

```



```

9306 \endgroup
9307 }%
9308 \renewcommand\Vr@f[2][]{%
9309 \begingroup
9310 \let\T@pageref\@pagerefstar
9311 \hyperref[{#2}]{%
9312 \Ref*{#2}
9313 \vpageref[#1]{#2}%
9314 }%
9315 \endgroup
9316 }%
9317 \renewcommand\vr@f[2][]{%
9318 \begingroup
9319 \let\T@pageref\@pagerefstar
9320 \hyperref[{#2}]{%
9321 \ref*{#2}
9322 \vpageref[#1]{#2}%
9323 }%
9324 \endgroup
9325 }%
9326 \renewcommand\vref@star[2][]{%
9327 \begingroup
9328 \let\T@pageref\@pagerefstar
9329 \ref*{#2}
9330 \vpageref[#1]{#2}%
9331 \endgroup
9332 }%
old varioref:
9333 \else
9334 \def\Vr@f#1{%
9335 \leavevmode\unskip\vref@space
9336 \hyperref[{#1}]{%
9337 \Ref*{#1}%
9338 \let\vref@space\nobreakspace
9339 \@vpageref[\unskip]{#1}%
9340 }%
9341 }%
9342 \def\vr@f#1{%
9343 \leavevmode\unskip\vref@space
9344 \begingroup
9345 \let\T@pageref\@pagerefstar
9346 \hyperref[{#1}]{%
9347 \ref*{#1}%
9348 \vpageref[\unskip]{#1}%
9349 }%
9350 \endgroup
9351 }%
9352 \fi
9353 %FMi -end mod
9354 }{}%
9355 }
9356
9357 \DeclareRobustCommand*\autopageref}{%
9358 \ifstar{%
9359 \HyRef@autopagerefname\pageref*%
9360 }\HyRef@autopageref
9361 }

```

```

9362 \def\HyRef@autopageref#1{%
9363   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9364 }
9365 \def\HyRef@autopagerefname{%
9366   \ltx@ifundefined{pageautorefname}{%
9367     \ltx@ifundefined{pagename}{%
9368       \Hy@Warning{No autoref name for `page'}%
9369     }{%
9370       \pagename\nobreakspace
9371     }%
9372   }{%
9373     \pageautorefname\nobreakspace
9374   }%
9375 }

```

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

```

9376 \DeclareRobustCommand*{\autoref}{%
9377   \leavevmode
9378   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9379 }
9380 \def\HyRef@autoref#1#2{%
9381   \begingroup
9382   \Hy@safe@activetrue
9383   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9384   \endgroup
9385 }
9386 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9387   \HyRef@ShowKeysRef{#2}%
9388   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9389   \edef\HyRef@thisref{%
9390     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9391   }%
9392   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9393   \Hy@safe@activesfalse
9394   #3{%
9395     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9396   }{%
9397     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9398   }{%
9399     \HyRef@currentHtag
9400     \expandafter\@firstoffive#1\@empty\@empty\@empty
9401     \null
9402   }%
9403   \else
9404     \protect\G@refundefinedtrue
9405     \nfss@text{\reset@font\bfseries ??}%
9406     \@latex@warning{%
9407       Reference `#2' on page \thepage\space undefined%
9408     }%
9409     \fi
9410 }
9411 \def\HyRef@testreftype#1.#2\.{%
9412   \ltx@ifundefined{#1autorefname}{%
9413     \ltx@ifundefined{#1name}{%
9414       \HyRef@StripStar#1\*\@nil{#1}%
9415     \ltx@ifundefined{\HyRef@name autorefname}{%
9416       \ltx@ifundefined{\HyRef@name name}{%

```

```

9417 \def\HyRef@currentHtag{}%
9418 \Hy@Warning{No autoref name for `#1'}%
9419 }{%
9420 \edef\HyRef@currentHtag{%
9421 \expandafter\noexpand\csname\HyRef@name name\endcsname
9422 \noexpand~%
9423 }%
9424 }%
9425 }{%
9426 \edef\HyRef@currentHtag{%
9427 \expandafter\noexpand
9428 \csname\HyRef@name autorefname\endcsname
9429 \noexpand~%
9430 }%
9431 }%
9432 }{%
9433 \edef\HyRef@currentHtag{%
9434 \expandafter\noexpand\csname#1name\endcsname
9435 \noexpand~%
9436 }%
9437 }%
9438 }{%
9439 \edef\HyRef@currentHtag{%
9440 \expandafter\noexpand\csname#1autorefname\endcsname
9441 \noexpand~%
9442 }%
9443 }%
9444 }
9445 \def\HyRef@StripStar#1*\#2\@nil#3{%
9446 \def\HyRef@name{#2}%
9447 \ifx\HyRef@name\HyRef@CaseStar
9448 \def\HyRef@name{#1}%
9449 \else
9450 \def\HyRef@name{#3}%
9451 \fi
9452 }
9453 \def\HyRef@CaseStar{*\\}
9454 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

9455 \let\HyRef@ShowKeysRef\@gobble
9456 \def\HyRef@ShowKeysInit{%
9457 \begingroup\expandafter\expandafter\expandafter\endgroup
9458 \expandafter\ifx\csname SK@@label\endcsname\relax
9459 \else
9460 \ifx\SK@ref\@empty
9461 \else
9462 \def\HyRef@ShowKeysRef{%
9463 \SK@\SK@\@ref
9464 }%
9465 \fi
9466 \fi
9467 }
9468 \@ifpackageloaded{showkeys}{%
9469 \HyRef@ShowKeysInit
9470 }{%

```

```

9471 \Hy@AtBeginDocument{%
9472   \@ifpackageloaded{showkeys}{%
9473     \HyRef@ShowKeysInit
9474   }{}%
9475 }%
9476 }

```

Defaults for the names that `\autoref` uses.

```

9477 \providecommand*{\AMSautorefname}{\equationautorefname}
9478 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
9479 \providecommand*{\Itemautorefname}{\itemautorefname}
9480 \providecommand*{\itemautorefname}{item}
9481 \providecommand*{\equationautorefname}{Equation}
9482 \providecommand*{\footnoteautorefname}{footnote}
9483 \providecommand*{\itemautorefname}{item}
9484 \providecommand*{\figureautorefname}{Figure}
9485 \providecommand*{\tableautorefname}{Table}
9486 \providecommand*{\partautorefname}{Part}
9487 \providecommand*{\appendixautorefname}{Appendix}
9488 \providecommand*{\chapterautorefname}{chapter}
9489 \providecommand*{\sectionautorefname}{section}
9490 \providecommand*{\subsectionautorefname}{subsection}
9491 \providecommand*{\subsubsectionautorefname}{subsubsection}
9492 \providecommand*{\paragraphautorefname}{paragraph}
9493 \providecommand*{\subparagraphautorefname}{subparagraph}
9494 \providecommand*{\FancyVerbLineautorefname}{line}
9495 \providecommand*{\theoremautorefname}{Theorem}
9496 \providecommand*{\pageautorefname}{page}
9497 </package>

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_TE_X offers `\pdfescapestring`.

```

9498 <{*pdfTex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9499 \begingroup\expandafter\expandafter\expandafter\endgroup
9500 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9501   \begingroup
9502     \catcode`\|=0 %
9503     \@makeother\|%
9504     |@firstofone{|endgroup
9505     |def|Hy@pstringdef#1#2{%
9506       |begingroup
9507         |edef~{|string~}%
9508         |xdef|Hy@gtemp{#2}%
9509       |endgroup
9510       |let#1|Hy@gtemp
9511       |@onelevel@sanitize#1%
9512       |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%

```

```

9513 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9514 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9515 }%
9516 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9517   #1%
9518   |ifx|\#2|\%%
9519   |else
9520     \\\%
9521     |ltx@ReturnAfterFi{%
9522       |Hy@ExchangeBackslash#2|@nil
9523     }%
9524   |fi
9525 }%
9526 }%
9527 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9528   #1%
9529   \ifx\#2\%%
9530   \else
9531     \@backslashchar(%
9532     \ltx@ReturnAfterFi{%
9533       \Hy@ExchangeLeftParenthesis#2\@nil
9534     }%
9535   \fi
9536 }%
9537 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9538   #1%
9539   \ifx\#2\%%
9540   \else
9541     \@backslashchar)%
9542     \ltx@ReturnAfterFi{%
9543       \Hy@ExchangeRightParenthesis#2\@nil
9544     }%
9545   \fi
9546 }%
9547 \else
9548 \def\Hy@pstringdef#1#2{%
9549   \begingroup
9550   \edef~{\string~}%
9551   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9552   \endgroup
9553   \let#1\Hy@gtemp
9554 }%
9555 \fi
9556 </pdfTeX> | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9557 <*pdfTeX>
9558 \providecommand*\XR@ext}{pdf}
9559 \Hy@setbreaklinks{true}
9560 \def\HyPat@ObjRef{%
9561   [0-9]*[1-9][0-9]* 0 R%
9562 }

```

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`.

- pdfTeX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfTeX 1.30, 2005-08-081: \pdfminorversion

```

9563 \let\Hy@pdfminorversion\relax
9564 \begingroup\expandafter\expandafter\expandafter\endgroup
9565 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9566 \begingroup\expandafter\expandafter\expandafter\endgroup
9567 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9568 \else
9569 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9570 \fi
9571 \else
9572 \def\Hy@pdfminorversion{\pdfminorversion}%
9573 \fi
9574 \@ifundefined{Hy@pdfminorversion}{%
9575 \PackageInfo{hyperref}{%
9576 PDF version is not set, because pdfTeX is too old (<1.10a)%
9577 }%
9578 }{%
9579 \ifHy@ocgcolorlinks
9580 \ifnum\Hy@pdfminorversion<5 %
9581 \kvsetkeys{Hyp}{pdfversion=1.5}%
9582 \fi
9583 \fi
9584 \ifHy@setpdfversion
9585 \ifnum\Hy@pdfversion<5 %
9586 \ltx@ifundefined{pdfobjcompresslevel}{%
9587 }{%
9588 \ifHy@verbose
9589 \Hy@InfoNoLine{%
9590 PDF object streams are disabled, because they are%
9591 \MessageBreak
9592 not supported in requested PDF version %
9593 1.\Hy@pdfversion
9594 }%
9595 \fi
9596 \pdfobjcompresslevel=\ltx@zero
9597 }%
9598 \fi
9599 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9600 \else
9601 \let\Hy@temp\ltx@empty
9602 \def\Hy@temp@A#1#2{%
9603 \ifnum#1>\ltx@zero
9604 \edef\Hy@temp{%
9605 \Hy@temp
9606 \space\space
9607 \the#1\space #2%
9608 \ifnum#1=\ltx@one\else s\fi
9609 \MessageBreak
9610 }%
9611 \fi
9612 }%
9613 \Hy@temp@A\pdflastobj{PDF object}%
9614 \Hy@temp@A\pdflastxform{form XObject}%
9615 \Hy@temp@A\pdflastximage{image XObject}%
9616 \Hy@temp@A\pdflastannot{annotation}%

```

```

9617 \ltx@ifundefined{pdflastlink}{%
9618 }{%
9619 \Hy@temp@A\pdflastlink{link}%
9620 }%
9621 \ifx\Hy@temp\ltx@empty
9622 \Hy@pdfminorversion=\Hy@pdfversion\relax
9623 \else
9624 \let\Hy@temp@A\ltx@empty
9625 \ifnum\Hy@pdfversion=4 %
9626 \IfFileExists{pdf14.sty}{%
9627 \def\Hy@temp@A{%
9628 \MessageBreak
9629 Or \string\RequirePackage{pdf14} can be used%
9630 \MessageBreak
9631 before \string\documentclass\space as shortcut%
9632 }%
9633 }{}%
9634 \fi
9635 \Hy@WarningNoLine{%
9636 The PDF version number could not be set,\MessageBreak
9637 because some PDF objects are already written:%
9638 \MessageBreak
9639 \Hy@temp
9640 The version should be set as early as possible:%
9641 \MessageBreak
9642 \space\space
9643 \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9644 \string\relax
9645 \ifnum\Hy@pdfversion<5 %
9646 \ltx@ifundefined{pdfobjcompresslevel}{%
9647 }{%
9648 \MessageBreak
9649 \space\space
9650 \string\pdfobjcompresslevel=0\string\relax
9651 }%
9652 \fi
9653 \Hy@temp@A
9654 }%
9655 \fi
9656 \fi
9657 \PackageInfo{hyperref}{%
9658 \expandafter\string\Hy@pdfminorversion
9659 :=\number\Hy@pdfversion\space
9660 }%
9661 \fi
9662 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9663 }
9664 \Hy@DisableOption{pdfversion}%

9665 \ifHy@ocgcolorlinks
9666 \pdf@ifdraftmode{}{%
9667 \immediate\pdfobj{%
9668 <<%
9669 /Type/OCG%
9670 /Name(View)%
9671 /Usage<<%
9672 /Print<<%
9673 /PrintState/OFF%

```

```

9674      >>%
9675      /View<<%
9676      /ViewState/ON%
9677      >>%
9678      >>%
9679      >>%
9680 }%
9681  \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9682  \immediate\pdfobj{%
9683  <<%
9684  /Type/OCG%
9685  /Name(Print)%
9686  /Usage<<%
9687  /Print<<%
9688  /PrintState/ON%
9689  >>%
9690  /View<<%
9691  /ViewState/OFF%
9692  >>%
9693  >>%
9694  >>%
9695  }%
9696  \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
9697  \immediate\pdfobj{%
9698  [%
9699  \OBJ@OCG@view\space\OBJ@OCG@print
9700  ]%
9701  }%
9702  \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
9703  \pdfcatalog{%
9704  /OCProperties<<%
9705  /OCGs \OBJ@OCGs
9706  /D<<%
9707  /OFF[\OBJ@OCG@print]%
9708  /AS[%
9709  <<%
9710  /Event/View%
9711  /OCGs \OBJ@OCGs
9712  /Category[/View]%
9713  >>%
9714  <<%
9715  /Event/Print%
9716  /OCGs \OBJ@OCGs
9717  /Category[/Print]%
9718  >>%
9719  <<%
9720  /Event/Export%
9721  /OCGs \OBJ@OCGs
9722  /Category[/Print]%
9723  >>%
9724  ]%
9725  >>%
9726  >>%
9727  }%
9728  \begingroup
9729  \edef\x{\endgroup
9730  \pdfpageresources{%

```



```

9731      \the\pdfpageresources
9732      /Properties<<%
9733      /OCView \OBJ@OCG@view
9734      /OCPrint \OBJ@OCG@print
9735      >>%
9736    }%
9737  }%
9738  \x
9739 }%
9740 \Hy@AtBeginDocument{%
9741   \def\Hy@colorlink#1{%
9742     \begingroup
9743     \ifHy@ocgcolorlinks
9744       \def\Hy@ocgcolor{#1}%
9745       \setbox0=\hbox\bgroup\color@begingroup
9746     \else
9747       \HyColor@UseColor#1%
9748     \fi
9749   }%
9750   \def\Hy@endcolorlink{%
9751     \ifHy@ocgcolorlinks
9752       \color@endgroup\egroup
9753     \mbox{%
9754       \pdfliteral page{/OC/OCPrint BDC}%
9755       \rlap{\copy0}%
9756       \pdfliteral page{EMC/OC/OCView BDC}%
9757     \begingroup
9758       \expandafter\HyColor@UseColor\Hy@ocgcolor
9759       \box0 %
9760     \endgroup
9761     \pdfliteral page{EMC}%
9762   }%
9763   \fi
9764   \endgroup
9765 }%
9766 }%
9767 \else
9768   \Hy@DisableOption{ocgcolorlinks}%
9769 \fi

```

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

```

9770 \def\setpdfinkmargin#1{%
9771   \begingroup
9772   \setlength{\dimen@}{#1}%
9773   \expandafter\endgroup
9774   \expandafter\pdfinkmargin\the\dimen@\relax
9775 }
9776 \ifx\pdfstartlink\@undefined% less than version 14
9777   \let\pdfstartlink\pdfannotlink
9778   \let\pdfinkmargin\@tempdima
9779   \let\pdfxform\pdfform
9780   \let\pdflastxform\pdfastform
9781   \let\pdfrefxform\pdfrefform
9782 \else
9783   \pdfinkmargin1pt %
9784 \fi

```

First set up the default linking

```
9785 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9786 \Hy@WrapperDef\new@pdfink#1{%
9787   \ifhmode
9788     \@savsf\spacefactor
9789   \fi
9790   \Hy@SaveLastskip
9791   \Hy@VerboseAnchor{#1}%
9792   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9793   \Hy@DestName\Hy@pstringDest\@pdfview
9794   \Hy@RestoreLastskip
9795   \ifhmode
9796     \spacefactor\@savsf
9797   \fi
9798 }
9799 \let\pdf@endanchor\@empty
```

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

```
9800 \def\Hy@DestName#1#2{%
9801   \pdfdest name{#1}#2\relax
9802 }
```

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.

```
9803 \providecommand*\@pdfborder{0 0 1}
9804 \providecommand*\@pdfborderstyle{}
9805 \def\Hy@undefinedname{UNDEFINED}
9806 \def\find@pdfink#1#2{%
9807   \leavevmode
9808   \protected@edef\Hy@testname{#2}%
9809   \ifx\Hy@testname\@empty
9810     \Hy@Warning{%
9811       Empty destination name,\MessageBreak
9812       using '\Hy@undefinedname'%
9813     }%
9814     \let\Hy@testname\Hy@undefinedname
9815   \else
9816     \Hy@pstringdef\Hy@testname{%
9817       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9818     }%
9819   \fi
9820   \Hy@StartlinkName{%
9821     \ifHy@pdfa /F 4\fi
9822     \Hy@setpdfborder
9823     \Hy@setpdfhighlight
9824     \ifx\CurrentBorderColor\relax
9825       \else
9826         /C[\CurrentBorderColor]%
9827     \fi
9828   }\Hy@testname
9829   \expandafter\Hy@colorlink\csname @#1color\endcsname
9830 }
9831 \def\Hy@StartlinkName#1#2{%
```

```

9832 \pdfstartlink attr{#1}goto name{#2}\relax
9833 }
9834 \def\close@pdfink{%
9835   \Hy@endcolorlink
9836   \Hy@VerboseLinkStop
9837   \pdfendlink
9838 }
9839 \def\hyper@anchor#1{%
9840   \new@pdfink{#1}\anchor@spot\pdf@endanchor
9841 }
9842 \def\hyper@anchorstart#1{%
9843   \new@pdfink{#1}%
9844   \Hy@activeanchortrue
9845 }
9846 \def\hyper@anchorend{%
9847   \pdf@endanchor
9848   \Hy@activeanchorfalse
9849 }
9850 \def\hyper@linkstart#1#2{%
9851   \Hy@VerboseLinkStart{#1}{#2}%
9852   \ltx@ifundefined{#@1bordercolor}{%
9853     \let\CurrentBorderColor\relax
9854   }{%
9855     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9856   }%
9857   \find@pdfink{#1}{#2}%
9858 }
9859 \def\hyper@linkend{\close@pdfink}
9860 \def\hyper@link#1#2#3{%
9861   \Hy@VerboseLinkStart{#1}{#2}%
9862   \ltx@ifundefined{#@1bordercolor}{%
9863     \let\CurrentBorderColor\relax
9864   }{%
9865     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9866   }%
9867   \find@pdfink{#1}{#2}#3\Hy@xspace@end
9868   \close@pdfink
9869 }
9870 \let\CurrentBorderColor\@linkbordercolor
9871 \def\hyper@linkurl#1#2{%
9872   \begingroup
9873     \Hy@pstringdef\Hy@pstringURI{#2}%
9874     \hyper@chars
9875     \leavevmode
9876     \pdfstartlink
9877       attr{%
9878         \Hy@setpdfborder
9879         \Hy@setpdfhighlight
9880         \ifx\@urlbordercolor\relax
9881           \else
9882             /C[\@urlbordercolor]%
9883           \fi
9884         }%
9885       user{%
9886         /Subtype/Link%
9887         \ifHy@pdfa /F 4\fi
9888         /A<<%

```

```

9889      /Type/Action%
9890      /S/URI%
9891      /URI(\Hy@pstringURI)%
9892      \ifHy@href@ismap
9893      /IsMap true%
9894      \fi
9895      \Hy@href@nextactionraw
9896      >>%
9897      }%
9898      \relax
9899      \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9900      \close@pdfink
9901      \endgroup
9902  }
9903  \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9904  \begingroup
9905    \def\Hy@pstringF{#2}%
9906    \Hy@CleanupFile\Hy@pstringF
9907    \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9908    \Hy@pstringdef\Hy@pstringD{#3}%
9909    \Hy@MakeRemoteAction
9910    \leavevmode
9911    \pdfstartlink
9912    attr{%
9913      \Hy@setpdfborder
9914      \Hy@setpdfhighlight
9915      \ifx\@filebordercolor\relax
9916      \else
9917      /C[\@filebordercolor]%
9918      \fi
9919    }%
9920    user {%
9921      /Subtype/Link%
9922      \ifHy@pdfa /F 4\fi
9923      /A<<%
9924      /F(\Hy@pstringF)%
9925      /S/GoToR%
9926      \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}

```

```

9927      \ifx\#3\%
9928      /D[\Hy@href@page\@pdfremotestartview]%
9929      \else
9930      /D(\Hy@pstringD)%
9931      \fi
9932      \Hy@href@nextactionraw
9933      >>%

```

```

9934    }%
9935    \relax
9936    \Hy@colorlink\@filecolor#1\Hy@xspace@end
9937    \close@pdflink
9938    \endgroup
9939  }
9940  \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9941    \begingroup
9942    \Hy@pstringdef\Hy@pstringF{#1}%
9943    \Hy@pstringdef\Hy@pstringP{#3}%
9944    \leavevmode
9945    \pdfstartlink
9946    attr{%
9947      \Hy@setpdfborder
9948      \Hy@setpdfhighlight
9949      \ifx\@runbordercolor\relax
9950        \else
9951        /C[\@runbordercolor]%
9952      \fi
9953    }%
9954    user {%
9955      /Subtype/Link%
9956      \ifHy@pdfa /F 4\fi
9957      /A<<%
9958      /F(\Hy@pstringF)%
9959      /S/Launch%
9960      \Hy@SetNewWindow
9961      \ifx\#3\%
9962        \else
9963        /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9964      \fi
9965      \Hy@href@nextactionraw
9966      >>%
9967    }%
9968    \relax
9969    \Hy@colorlink\@runcolor#2\Hy@xspace@end
9970    \close@pdflink
9971    \endgroup
9972  }

```

\PDF@SetupDox

```

9973 \def\PDF@SetupDoc{%
9974   \ifx\@pdfpagescrop\@empty
9975   \else
9976     \edef\process@me{%
9977       \pdfpagesattr={%
9978         /CropBox[\@pdfpagescrop]%
9979         \expandafter\ifx\expandafter\the\pdfpagesattr\%
9980         \else
9981         ^^J\the\pdfpagesattr
9982       \fi
9983     }%
9984   }%
9985   \process@me
9986   \fi
9987   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9988   \pdfcatalog{%

```

```

9989 /PageMode/\@pdfpagemode
9990 \ifx\@baseurl\@empty
9991 \else
9992 /URI<</Base(\Hy@pstringB)>>%
9993 \fi
9994 }%
9995 \ifx\@pdfstartpage\@empty
9996 \else
9997 \ifx\@pdfstartview\@empty
9998 \else
9999 openaction goto page\@pdfstartpage{\@pdfstartview}%
10000 \fi
10001 \fi
10002 \edef\Hy@temp{%
10003 \ifHy@pdftoolbar\else /HideToolbar true\fi
10004 \ifHy@pdfmenubar\else /HideMenubar true\fi
10005 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10006 \ifHy@pdfwindow /FitWindow true\fi
10007 \ifHy@pdfcenterwindow /CenterWindow true\fi
10008 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10009 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10010 \Hy@UseNameKey{Direction}\@pdfdirection
10011 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10012 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10013 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10014 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10015 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10016 \Hy@UseNameKey{Duplex}\@pdfduplex
10017 \ifx\@pdfpicktraybypdfsize\@empty
10018 \else
10019 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10020 \fi
10021 \ifx\@pdfprintpagerange\@empty
10022 \else
10023 /PrintPageRange[\@pdfprintpagerange]%
10024 \fi
10025 \ifx\@pdfnumcopies\@empty
10026 \else
10027 /NumCopies \@pdfnumcopies
10028 \fi
10029 }%
10030 \pdfcatalog{%
10031 \ifx\Hy@temp\@empty
10032 \else
10033 /ViewerPreferences<<\Hy@temp>>%
10034 \fi
10035 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10036 \ifx\@pdflang\relax
10037 \else
10038 /Lang(\@pdflang)%
10039 \fi
10040 }%
10041 }

```

\PDF@FinishDoc

```

10042 \def\PDF@FinishDoc{%
10043 \pdf@ifdraftmode{ }{%
10044 \Hy@UseMaketitleInfos

```

```

10045 \HyInfo@GenerateAddons
10046 \pdfinfo{%
10047   /Author(\@pdfauthor)%
10048   /Title(\@pdftitle)%
10049   /Subject(\@pdfsubject)%
10050   /Creator(\@pdfcreator)%
10051   \ifx\@pdfcreationdate\@empty
10052   \else
10053     /CreationDate(\@pdfcreationdate)%
10054   \fi
10055   \ifx\@pdfmoddate\@empty
10056   \else
10057     /ModDate(\@pdfmoddate)%
10058   \fi
10059   \ifx\@pdfproducer\relax
10060   \else
10061     /Producer(\@pdfproducer)%
10062   \fi
10063   /Keywords(\@pdfkeywords)%
10064   \ifx\@pdftrapped\@empty
10065   \else
10066     /Trapped/\@pdftrapped
10067   \fi
10068   \HyInfo@Addons
10069 }%
10070 }%
10071 \Hy@DisableOption{pdfauthor}%
10072 \Hy@DisableOption{pdftitle}%
10073 \Hy@DisableOption{pdfsubject}%
10074 \Hy@DisableOption{pdfcreator}%
10075 \Hy@DisableOption{addtopdfcreator}%
10076 \Hy@DisableOption{pdfcreationdate}%
10077 \Hy@DisableOption{pdfmoddate}%
10078 \Hy@DisableOption{pdfproducer}%
10079 \Hy@DisableOption{pdfkeywords}%
10080 \Hy@DisableOption{pdftrapped}%
10081 \Hy@DisableOption{pdfinfo}%
10082 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10083 \def\hyper@pagetransition{%
10084   \ifx\@pdfpagetransition\relax
10085   \else
10086     \expandafter\Hy@RemoveTransPageAttr
10087     \the\pdfpageattr^^J/Trans{}}>>\END
10088   \ifx\@pdfpagetransition\@empty
10089   \else
10090     \edef\@processme{%
10091       \global\pdfpageattr{%
10092         \the\pdfpageattr
10093         ^^J/Trans << /S /\@pdfpagetransition\space >>%
10094       }%
10095     }%
10096     \@processme
10097   \fi

```

```
10098 \fi
10099 }
```

`\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.

```
10100 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10101 \ifx\#2\%
10102 \global\pdfpageattr{#1}%
10103 \else
10104 \Hy@RemoveTransPageAttr#1#4\END
10105 \fi
10106 }
```

`\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`.

```
10107 \def\hyper@pageduration{%
10108 \ifx\@pdfpageduration\relax
10109 \else
10110 \expandafter
10111 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10112 \ifx\@pdfpageduration\@empty
10113 \else
10114 \edef\@processme{%
10115 \global\pdfpageattr{%
10116 \the\pdfpageattr
10117 ^^J/Dur \@pdfpageduration\space
10118 }%
10119 }%
10120 \@processme
10121 \fi
10122 \fi
10123 }
```

`\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.

```
10124 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10125 \ifx\#2\%
10126 \global\pdfpageattr{#1}%
10127 \else
10128 \Hy@RemoveDurPageAttr#1#4\END
10129 \fi
10130 }
```

`\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).

```
10131 \def\hyper@pagehidden{%
10132 \ifHy@useHidKey
10133 \expandafter
10134 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
```



```

10135 \ifHy@pdfpagehidden
10136 \edef\@processme{%
10137   \global\pdfpageattr{%
10138     \the\pdfpageattr
10139     ^^J/Hid true % SPACE
10140   }%
10141 }%
10142 \@processme
10143 \fi
10144 \fi
10145 }

```

`\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.

```

10146 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10147   \ifx\#2\%
10148     \global\pdfpageattr{#1}%
10149   \else
10150     \Hy@RemoveHidPageAttr#1#4\END
10151   \fi
10152 }

```

```

10153 \pdf@ifdraftmode{}{%
10154   \g@addto@macro\Hy@EveryPageHook{%
10155     \hyper@pagetransition
10156     \hyper@pageduration
10157     \hyper@pagehidden
10158   }%
10159 }

```

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

```

10160 </pdftex>
10161 <*pdftex | xetex>
10162 \Hy@AtBeginDocument{%
10163   \ifHy@setpagesize
10164     \expandafter\@firstofone
10165   \else
10166     \expandafter\@gobble
10167   \fi
10168 }%
10169 \@ifclassloaded{seminar}{%
10170 <*pdftex>
10171   \setlength{\pdfhorigin}{1truein}%
10172   \setlength{\pdfvorigin}{1truein}%
10173 </pdftex>
10174   \ifportrait
10175     \ifdim\paperwidth=\z@
10176     \else
10177       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10178     \fi
10179     \ifdim\paperheight=\z@
10180     \else
10181       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10182     \fi
10183   \else

```

```

10184 \ifdim\paperheight=\z@
10185 \else
10186 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10187 \fi
10188 \ifdim\paperwidth=\z@
10189 \else
10190 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10191 \fi
10192 \fi
10193 }{%
10194 \ltx@ifundefined{stockwidth}{%
10195 \ifdim\paperwidth>\z@
10196 \setlength{\pdfpagewidth}{\paperwidth}%
10197 \fi
10198 \ifdim\paperheight>\z@
10199 \setlength{\pdfpageheight}{\paperheight}%
10200 \fi
10201 }{%
10202 \ifdim\stockwidth>\z@
10203 \setlength{\pdfpagewidth}{\stockwidth}%
10204 \fi
10205 \ifdim\stockheight>\z@
10206 \setlength{\pdfpageheight}{\stockheight}%
10207 \fi
10208 }%
10209 }%
10210 }%
10211 \Hy@DisableOption{setpagesize}%
10212 }
10213 </pdfTeX | xetex>
10214 < *pdfTeX>
10215 \def\Acrobatmenu#1#2{%
10216 \Hy@Acrobatmenu{#1}{#2}{%
10217 \leavevmode
10218 \EdefEscapeName\Hy@temp@menu{#1}%
10219 \pdfstartlink
10220 attr{%
10221 \Hy@setpdfborder
10222 \Hy@setpdfhighlight
10223 \ifx\@menubordercolor\relax
10224 \else
10225 /C[\@menubordercolor]%
10226 \fi
10227 }%
10228 user{%
10229 /Subtype/Link%
10230 \ifHy@pdfa /F 4\fi
10231 /A<<%
10232 /S/Named%
10233 /N/\Hy@temp@menu
10234 \Hy@href@nextactionraw
10235 >>%
10236 }%
10237 \relax
10238 \Hy@colorlink\@menucolor#2%
10239 \close@pdflink
10240 }%

```

10241 }

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_T_EX'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 pdf_T_EX—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.

```
10242 \def\Hy@FixNotFirstPage{%
10243   \gdef\Hy@FixNotFirstPage{%
10244     \setbox\AtBeginShipoutBox=\hbox{%
10245       \copy\AtBeginShipoutBox
10246     }%
10247   }%
10248 }
10249 \ltx@ifpackagelater{atbegshi}{2011/10/05}{}%
10250 }{%
10251   \AtBeginShipout{\Hy@FixNotFirstPage}%
10252 }
10253 \</pdfTeX>
```

47.3 hypertext

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

The *href* and *name* commands must be paired with an *end* command later in the _T_EX file — the _T_EX 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.

```

10254 (*hypertext)
10255 \providecommand*\XR@ext}{dvi}
10256 \let\PDF@FinishDoc\ltx@empty
10257 \def\PDF@SetupDoc{%
10258   \ifx\@baseurl\@empty
10259   \else
10260     \special{html:<base href="\@baseurl">}%
10261   \fi
10262 }
10263 \Hy@WrapperDef\hyper@anchor#1{%
10264   \Hy@SaveLastskip
10265   \Hy@VerboseAnchor{#1}%
10266   \begingroup
10267     \let\protect=\string
10268     \hyper@chars
10269     \special{html:<a name=%
10270       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10271   \endgroup
10272   \Hy@activeanchortrue
10273   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10274   \special{html:</a>}%
10275   \Hy@activeanchorfalse
10276   \Hy@RestoreLastskip
10277 }
10278 \Hy@WrapperDef\hyper@anchorstart#1{%
10279   \Hy@SaveLastskip
10280   \Hy@VerboseAnchor{#1}%
10281   \begingroup
10282     \hyper@chars
10283     \special{html:<a name=%
10284       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10285   \endgroup
10286   \Hy@activeanchortrue
10287 }
10288 \def\hyper@anchorend{%
10289   \special{html:</a>}%
10290   \Hy@activeanchorfalse
10291   \Hy@RestoreLastskip
10292 }
10293 \def\@urltype{url}
10294 \def\hyper@linkstart#1#2{%
10295   \Hy@VerboseLinkStart{#1}{#2}%
10296   \expandafter\Hy@colorlink\csname @#1color\endcsname
10297   \def\Hy@tempa{#1}%
10298   \ifx\Hy@tempa\@urltype
10299     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10300   \else
10301     \begingroup
10302       \hyper@chars
10303       \special{html:<a href=%
10304         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10305     \endgroup
10306   \fi

```

```

10307 }
10308 \def\hyper@linkend{%
10309   \special{html:</a>}%
10310   \Hy@endcolorlink
10311 }
10312 \def\hyper@linkfile#1#2#3{%
10313   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10314 }
10315 \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.

```

10316 \leavevmode
10317 \ifHy@raiselinks
10318   \Hy@SaveSpaceFactor
10319   \Hy@SaveSavedSpaceFactor
10320   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10321   \Hy@RestoreSavedSpaceFactor
10322   \@linkdim\dp\@tempboxa
10323   \lower\@linkdim\hbox{%
10324     \hyper@chars
10325     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10326   }%
10327   \Hy@colorlink\@urlcolor
10328   \Hy@RestoreSpaceFactor
10329   #1%
10330   \Hy@SaveSpaceFactor
10331   \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvilips` 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).

```

10332 \advance\@linkdim by -6.5\p@
10333 \raise\@linkdim\hbox{\special{html:</a>}}%
10334 \Hy@endcolorlink
10335 \Hy@RestoreSpaceFactor
10336 \else
10337   \begingroup
10338     \hyper@chars
10339     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10340     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10341     \special{html:</a>}%
10342     \Hy@endcolorlink
10343   \endgroup
10344 \fi
10345 }

```

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

```

10346 \def\hyper@link#1#2#3{%
10347   \Hy@VerboseLinkStart{#1}{#2}%
10348   \hyper@linkurl{#3}{\##\Hy@DestNameFilter{#2}}%
10349 }
10350 \def\hyper@image#1#2{%
10351   \begingroup
10352     \hyper@chars
10353     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10354   \endgroup

```

```

10355 }
10356 </hypertex>
10357 <*dviwindo>

```

47.4 dviwindo

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

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

```

10358 \providecommand*\XR@ext}{dvi}
10359 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10360 \Hy@WrapperDef\hyper@anchor#1{%
10361   \Hy@SaveLastskip
10362   \Hy@VerboseAnchor{#1}%
10363   \begingroup
10364     \let\protect=\string
10365     \special{mark: #1}%
10366   \endgroup
10367   \Hy@activeanchortrue
10368   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10369   \Hy@activeanchorfalse
10370   \Hy@RestoreLastskip
10371 }
10372 \Hy@WrapperDef\hyper@anchorstart#1{%
10373   \Hy@SaveLastskip
10374   \Hy@VerboseAnchor{#1}%
10375   \special{mark: #1}%
10376   \Hy@activeanchortrue
10377 }
10378 \def\hyper@anchorend{%
10379   \Hy@activeanchorfalse
10380   \Hy@RestoreLastskip
10381 }
10382 \def\hyper@linkstart#1#2{%
10383   \Hy@VerboseLinkStart{#1}{#2}%
10384   \expandafter\Hy@colorlink\csname @#1color\endcsname
10385   \special{button: %
10386     10000000 %
10387     \number\baselineskip\space
10388     #2%
10389   }%
10390 }
10391 \def\hyper@linkend{%
10392   \Hy@endcolorlink
10393 }
10394 \def\hyper@link#1#2#3{%
10395   \Hy@VerboseLinkStart{#1}{#2}%
10396   \leavevmode

```

```

10397 \ifHy@raiselinks
10398 \Hy@SaveSpaceFactor
10399 \Hy@SaveSavedSpaceFactor
10400 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10401 \Hy@RestoreSavedSpaceFactor
10402 \@linkdim\dp\@tempboxa
10403 \lower\@linkdim\hbox{%
10404   \special{button: %
10405     \number\wd\@tempboxa\space
10406     \number\ht\@tempboxa\space
10407     #2%
10408   }%
10409   \expandafter\Hy@colorlink\csname @#1color\endcsname
10410   \Hy@RestoreSpaceFactor
10411   #3\Hy@xspace@end
10412   \Hy@SaveSpaceFactor
10413   \Hy@endcolorlink
10414 }%
10415 \@linkdim\ht\@tempboxa
10416 \advance\@linkdim by -6.5\p@
10417 \raise\@linkdim\hbox{}%
10418 \Hy@RestoreSpaceFactor
10419 \else
10420 \special{button: %
10421   \number\wd\@tempboxa\space
10422   \number\ht\@tempboxa\space
10423   #2%
10424 }%
10425 \expandafter\Hy@colorlink\csname @#1color\endcsname
10426 #3\Hy@xspace@end
10427 \Hy@endcolorlink
10428 \fi
10429 }
10430 \def\hyper@linkurl#1#2{%
10431   \begingroup
10432   \hyper@chars
10433   \leavevmode
10434   \ifHy@raiselinks
10435     \Hy@SaveSpaceFactor
10436     \Hy@SaveSavedSpaceFactor
10437     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10438     \Hy@RestoreSavedSpaceFactor
10439     \@linkdim\dp\@tempboxa
10440     \lower\@linkdim\hbox{%
10441       \special{button: %
10442         \number\wd\@tempboxa\space
10443         \number\ht\@tempboxa\space
10444         launch: \wwwbrowser\space
10445         #2%
10446       }%
10447       \Hy@colorlink\@urlcolor
10448       \Hy@RestoreSpaceFactor
10449       #1\Hy@xspace@end
10450       \Hy@SaveSpaceFactor
10451       \Hy@endcolorlink
10452     }%
10453     \@linkdim\ht\@tempboxa

```

```

10454 \advance\@linkdim by -6.5\p@
10455 \raise\@linkdim\hbox{}%
10456 \Hy@RestoreSpaceFactor
10457 \else
10458 \special{button: %
10459 \number\wd\@tempboxa\space
10460 \number\ht\@tempboxa\space
10461 launch: \wwwbrowser\space
10462 #2%
10463 }%
10464 \Hy@colorlink\@urlcolor
10465 #1\Hy@xspace@end
10466 \Hy@endcolorlink
10467 \fi
10468 \endgroup
10469 }
10470 \def\hyper@linkfile#1#2#3{%
10471 \begingroup
10472 \hyper@chars
10473 \leavevmode
10474 \ifHy@raiselinks
10475 \Hy@SaveSpaceFactor
10476 \Hy@SaveSavedSpaceFactor
10477 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10478 \Hy@RestoreSavedSpaceFactor
10479 \@linkdim\dp\@tempboxa
10480 \lower\@linkdim\hbox{%
10481 \special{button: %
10482 \number\wd\@tempboxa\space
10483 \number\ht\@tempboxa\space
10484 #3,%
10485 file: #2%
10486 }%
10487 \Hy@colorlink\@filecolor
10488 \Hy@RestoreSpaceFactor
10489 #1\Hy@xspace@end
10490 \Hy@SaveSpaceFactor
10491 \Hy@endcolorlink
10492 }%
10493 \@linkdim\ht\@tempboxa
10494 \advance\@linkdim by -6.5\p@
10495 \raise\@linkdim\hbox{}%
10496 \Hy@RestoreSpaceFactor
10497 \else
10498 \special{button: %
10499 \number\wd\@tempboxa\space
10500 \number\ht\@tempboxa\space
10501 #3,%
10502 file: #2%
10503 }%
10504 \Hy@colorlink\@filecolor
10505 #1\Hy@xspace@end
10506 \Hy@endcolorlink
10507 \fi
10508 \endgroup
10509 }
10510 \HyInfo@AddonUnsupportedtrue

```



```

10511 \def\PDF@FinishDoc{%
10512   \Hy@UseMaketitleInfos
10513   \HyInfo@TrappedUnsupported
10514   \special{PDF: Keywords \@pdfkeywords}%
10515   \special{PDF: Title \@pdftitle}%
10516   \special{PDF: Creator \@pdfcreator}%
10517   \ifx\@pdfcreationdate\@empty
10518   \else
10519     \special{PDF: CreationDate \@pdfcreationdate}%
10520   \fi
10521   \ifx\@pdfmoddate\@empty
10522   \else
10523     \special{PDF: ModDate \@pdfmoddate}%
10524   \fi
10525   \special{PDF: Author \@pdfauthor}%
10526   \ifx\@pdfproducer\relax
10527   \else
10528     \special{PDF: Producer \@pdfproducer}%
10529   \fi
10530   \special{PDF: Subject \@pdfsubject}%
10531   \Hy@DisableOption{pdfauthor}%
10532   \Hy@DisableOption{pdftitle}%
10533   \Hy@DisableOption{pdfsubject}%
10534   \Hy@DisableOption{pdfcreator}%
10535   \Hy@DisableOption{addtopdfcreator}%
10536   \Hy@DisableOption{pdfcreationdate}%
10537   \Hy@DisableOption{pdfcreationdate}%
10538   \Hy@DisableOption{pdfmoddate}%
10539   \Hy@DisableOption{pdfproducer}%
10540   \Hy@DisableOption{pdfkeywords}%
10541   \Hy@DisableOption{pdftrapped}%
10542   \Hy@DisableOption{pdfinfo}%
10543 }
10544 \def\PDF@SetupDoc{%
10545   \ifx\@baseurl\@empty
10546   \else
10547     \special{PDF: Base \@baseurl}%
10548   \fi
10549   \ifx\@pdfpagescrop\@empty\else
10550     \special{PDF: BBox \@pdfpagescrop}%
10551   \fi
10552   \def\Hy@temp{}%
10553   \ifx\@pdfstartpage\@empty
10554   \else
10555     \ifx\@pdfstartview\@empty
10556     \else
10557       \edef\Hy@temp{%
10558         ,Page=\@pdfstartpage
10559         ,View=\@pdfstartview
10560       }%
10561     \fi
10562   \fi
10563   \edef\Hy@temp{%
10564     \noexpand\pdfmark{%
10565       pdfmark=/DOCVIEW,%
10566       PageMode=/\@pdfpagemode
10567     }%

```

```

10568 }%
10569 }%
10570 \Hy@temp
10571 \ifx\@pdfpagescrop\@empty
10572 \else
10573 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10574 \fi
10575 \edef\Hy@temp{%
10576 \ifHy@pdftoolbar\else /HideToolbar true\fi
10577 \ifHy@pdfmenubar\else /HideMenubar true\fi
10578 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10579 \ifHy@pdfwindow /FitWindow true\fi
10580 \ifHy@pdfcenterwindow /CenterWindow true\fi
10581 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10582 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10583 \Hy@UseNameKey{Direction}\@pdfdirection
10584 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10585 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10586 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10587 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10588 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10589 \Hy@UseNameKey{Duplex}\@pdfduplex
10590 \ifx\@pdfpicktraybypdfsize\@empty
10591 \else
10592 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10593 \fi
10594 \ifx\@pdfprintpagerange\@empty
10595 \else
10596 /PrintPageRange[\@pdfprintpagerange]%
10597 \fi
10598 \ifx\@pdfnumcopies\@empty
10599 \else
10600 /NumCopies \@pdfnumcopies
10601 \fi
10602 }%
10603 \pdfmark{pdfmark=/PUT,%
10604 Raw={%
10605 \string{Catalog\string}<<%
10606 \ifx\Hy@temp\@empty
10607 \else
10608 /ViewerPreferences<<\Hy@temp>>%
10609 \fi
10610 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10611 \ifx\@pdflang\relax
10612 \else
10613 /Lang(\@pdflang)%
10614 \fi
10615 >>%
10616 }%
10617 }%
10618 }
10619 </dviwindo>
10620 <*\dvipdfm|xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10621 \providecommand*\XR@ext}{pdf}
10622 \Hy@setbreaklinks{true}
10623 \def\HyPat@ObjRef{%
10624   @[\^ ]+{%
10625 }
10626 \newsavebox{\pdfm@box}
10627 \def\@pdfm@mark#1{\special{pdf:#1}}
10628 \Hy@WrapperDef\@pdfm@dest#1{%
10629   \Hy@SaveLastskip
10630   \Hy@VerboseAnchor{#1}%
10631   \begingroup
10632     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10633     \def\x{XYZ}%
10634     \ifx\x\@pdfview
10635       \def\x{XYZ @xpos @ypos null}%
10636     \else
10637       \def\x{FitH}%
10638       \ifx\x\@pdfview
10639         \def\x{FitH @ypos}%
10640       \else
10641         \def\x{FitBH}%
10642         \ifx\x\@pdfview
10643           \def\x{FitBH @ypos}%
10644         \else
10645           \def\x{FitV}%
10646           \ifx\x\@pdfview
10647             \def\x{FitV @xpos}%
10648           \else
10649             \def\x{FitBV}%
10650             \ifx\x\@pdfview
10651               \def\x{FitBV @xpos}%
10652             \else
10653               \def\x{Fit}%
10654               \ifx\x\@pdfview
10655                 \let\x\@pdfview
10656               \else
10657                 \def\x{FitB}%
10658                 \ifx\x\@pdfview
10659                   \let\x\@pdfview
10660                 \else
10661                   \def\x{FitR}%
10662                   \ifx\x\@pdfview
10663                     \Hy@Warning{\`pdfview=FitR' is not supported}%
10664                     \def\x{XYZ @xpos @ypos null}%
10665                   \else
10666                     \@onelevel@sanitize\@pdfview
10667                     \Hy@Warning{%
10668                       Unknown value `\'@pdfview' for pdfview%
10669                     }%
10670                     \def\x{XYZ @xpos @ypos null}%
10671                   \fi
10672                 \fi
10673               \fi
10674             \fi
10675           \fi
10676         \fi
10677       \fi

```

```

10678 \fi
10679 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10680 \endgroup
10681 \Hy@RestoreLastskip
10682 }
10683 \providecommand*\@pdfview{XYZ}
10684 \providecommand*\@pdfborder{0 0 1}
10685 \providecommand*\@pdfborderstyle{}
10686 \def\hyper@anchor#1{%
10687 \@pdfm@dest{#1}%
10688 }
10689 \def\hyper@anchorstart#1{%
10690 \Hy@activeanchortrue
10691 \@pdfm@dest{#1}%
10692 }
10693 \def\hyper@anchorend{%
10694 \Hy@activeanchorfalse
10695 }
10696 \newcounter{Hy@AnnotLevel}
10697 \ifHy@ocgcolorlinks
10698 \def\OBJ@OCG@view{@OCG@view}%
10699 \@pdfm@mark{%
10700 obj \OBJ@OCG@view <<%
10701 /Type/OCG%
10702 /Name(View)%
10703 /Usage<<%
10704 /Print<<%
10705 /PrintState/OFF%
10706 >>%
10707 /View<<%
10708 /ViewState/ON%
10709 >>%
10710 >>%
10711 >>%
10712 }%
10713 \@pdfm@mark{close \OBJ@OCG@view}%
10714 \def\OBJ@OCG@print{@OCG@print}%
10715 \@pdfm@mark{%
10716 obj \OBJ@OCG@print <<%
10717 /Type/OCG%
10718 /Name(Print)%
10719 /Usage<<%
10720 /Print<<%
10721 /PrintState/ON%
10722 >>%
10723 /View<<%
10724 /ViewState/OFF%
10725 >>%
10726 >>%
10727 >>%
10728 }%
10729 \@pdfm@mark{close \OBJ@OCG@print}%
10730 \def\OBJ@OCGs{@OCGs}%
10731 \@pdfm@mark{%
10732 obj \OBJ@OCGs [%
10733 \OBJ@OCG@view\space\OBJ@OCG@print
10734 ]%

```

```

10735 }%
10736 \@pdfm@mark{close \OBJ@OCGs}%
10737 \@pdfm@mark{%
10738   put @catalog <<%
10739   /OCProperties<<%
10740   /OCGs \OBJ@OCGs
10741   /D<<%
10742   /OFF[\OBJ@OCG@print]%
10743   /AS[%
10744     <<%
10745     /Event/View%
10746     /OCGs \OBJ@OCGs
10747     /Category[/View]%
10748     >>%
10749     <<%
10750     /Event/Print%
10751     /OCGs \OBJ@OCGs
10752     /Category[/Print]%
10753     >>%
10754     <<%
10755     /Event/Export%
10756     /OCGs \OBJ@OCGs
10757     /Category[/Print]%
10758     >>%
10759   ]%
10760   >>%
10761   >>%
10762   >>%
10763 }%
10764 \AtBeginShipout{%
10765   \setbox\AtBeginShipoutBox=\hbox{%
10766     \copy\AtBeginShipoutBox
10767     \@pdfm@mark{%
10768       put @resources <<%
10769       /Properties<<%
10770       /OCView \OBJ@OCG@view
10771       /OCPrint \OBJ@OCG@print
10772       >>%
10773       >>%
10774     }%
10775   }%
10776 }%
10777 \Hy@AtBeginDocument{%
10778   \def\Hy@colorlink#1{%
10779     \begingroup
10780     \ifHy@ocgcolorlinks
10781       \def\Hy@ocgcolor{#1}%
10782       \setbox0=\hbox\bgroup\color@begingroup
10783     \else
10784       \HyColor@UseColor#1%
10785     \fi
10786   }%
10787   \def\Hy@endcolorlink{%
10788     \ifHy@ocgcolorlinks
10789       \color@endgroup\egroup
10790     \mbox{%
10791       \@pdfm@mark{content /OC/OCPrint BDC}%

```

```

10792      \rlap{\copy0}%
10793      \@pdfm@mark{content EMC/OC/OCView BDC}%
10794      \begingroup
10795        \expandafter\HyColor@UseColor\Hy@ocgcolor
10796        \box0 %
10797      \endgroup
10798      \@pdfm@mark{content EMC}%
10799    }%
10800  \fi
10801  \endgroup
10802 }%
10803 }%
10804 \else
10805   \Hy@DisableOption{ocgcolorlinks}%
10806 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10807 \def\Hy@BeginAnnot#1{%
10808   \global\advance\c@Hy@AnnotLevel\@ne
10809   \ifnum\c@Hy@AnnotLevel=\@ne
10810     #1%
10811   \fi
10812 }
10813 \def\Hy@endAnnot{%
10814   \ifnum\value{Hy@AnnotLevel}=\@ne
10815     \Hy@endcolorlink
10816     \@pdfm@mark{eann}%
10817   \fi
10818   \global\advance\c@Hy@AnnotLevel\m@ne
10819 }

10820 \def\Hy@undefinedname{UNDEFINED}
10821 \def\hyper@linkstart#1#2{%
10822   \Hy@VerboseLinkStart{#1}{#2}%
10823   \leavevmode
10824   \Hy@BeginAnnot{%
10825     \protected@edef\Hy@testname{#2}%
10826     \ifx\Hy@testname\@empty
10827       \Hy@Warning{%
10828         Empty destination name,\MessageBreak
10829         using '\Hy@undefinedname'%
10830       }%
10831     \let\Hy@testname\Hy@undefinedname
10832   \else
10833     \Hy@pstringdef\Hy@testname{%
10834       \expandafter\HyperDestNameFilter\expandafter{%
10835         \Hy@testname
10836       }%
10837     }%
10838   \fi
10839   \@pdfm@mark{%
10840     bann<<%
10841     /Type/Annot%
10842     /Subtype/Link%
10843     \ifHy@pdfa /F 4\fi
10844     \Hy@setpdfborder
10845     \Hy@setpdfhighlight

```

```

10846 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10847 \else
10848 /C[\csname @#1bordercolor\endcsname]%
10849 \fi
10850 /A<<%
10851 /S/GoTo%
10852 /D(\Hy@testname)%
10853 \Hy@href@nextactionraw
10854 >>%
10855 >>%
10856 }%
10857 \expandafter\Hy@colorlink\csname @#1color\endcsname
10858 }%
10859 }
10860 \def\hyper@linkend{\Hy@EndAnnot}%
10861 \def\hyper@link#1#2#3{%
10862 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10863 }
10864 \def\hyper@linkfile#1#2#3{%
10865 \leavevmode
10866 \Hy@BeginAnnot{%
10867 \def\Hy@pstringF{#2}%
10868 \Hy@CleanupFile\Hy@pstringF
10869 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10870 \Hy@pstringdef\Hy@pstringD{#3}%
10871 \Hy@MakeRemoteAction
10872 \@pdfm@mark{%
10873 bann<<%
10874 /Type/Annot%
10875 /Subtype/Link%
10876 \ifHy@pdfa /F 4\fi
10877 \Hy@setpdfborder
10878 \Hy@setpdfhighlight
10879 \ifx\@filebordercolor\relax
10880 \else
10881 /C[\@filebordercolor]%
10882 \fi
10883 /A<<%
10884 /S/GoToR%
10885 /F(\Hy@pstringF)%
10886 /D%
10887 \ifx\#3\%
10888 [\Hy@href@page\@pdfremotestartview]%
10889 \else
10890 (\Hy@pstringD)%
10891 \fi
10892 \Hy@SetNewWindow
10893 \Hy@href@nextactionraw
10894 >>%
10895 >>%
10896 }%
10897 \Hy@colorlink\@filecolor
10898 }%
10899 #1\Hy@xspace@end
10900 \Hy@EndAnnot
10901 }
10902 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname

```

```

10903 \leavevmode
10904 \Hy@BeginAnnot{%
10905   \Hy@pstringdef\Hy@pstringF{#1}%
10906   \Hy@pstringdef\Hy@pstringP{#3}%
10907   \@pdfm@mark{%
10908     bann<<%
10909     /Type/Annot%
10910     /Subtype/Link%
10911     \ifHy@pdfa /F 4\fi
10912     \Hy@setpdfborder
10913     \Hy@setpdfhighlight
10914     \ifx\@runbordercolor\relax
10915     \else
10916       /C[\@runbordercolor]%
10917     \fi
10918     /A<<%
10919     /F(\Hy@pstringF)%
10920     /S/Launch%
10921     \Hy@SetNewWindow
10922     \ifx\#3\%
10923     \else
10924       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10925     \fi
10926     \Hy@href@nextactionraw
10927     >>%
10928   >>%
10929   }%
10930   \Hy@colorlink\@runcolor
10931 }%
10932 #2\Hy@xspace@end
10933 \Hy@EndAnnot
10934 }
10935 \def\hyper@linkurl#1#2{%
10936 \leavevmode
10937 \Hy@BeginAnnot{%
10938   \Hy@pstringdef\Hy@pstringURI{#2}%
10939   \@pdfm@mark{%
10940     bann<<%
10941     /Type/Annot%
10942     /Subtype/Link%
10943     \ifHy@pdfa /F 4\fi
10944     \Hy@setpdfborder
10945     \Hy@setpdfhighlight
10946     \ifx\@urlbordercolor\relax
10947     \else
10948       /C[\@urlbordercolor]%
10949     \fi
10950     /A<<%
10951     /S/URI%
10952     /URI(\Hy@pstringURI)%
10953     \ifHy@href@ismap
10954       /IsMap true%
10955     \fi
10956     \Hy@href@nextactionraw
10957     >>%
10958   >>%
10959   }%

```



```

10960 \Hy@colorlink\@urlcolor
10961 }%
10962 #1\Hy@xspace@end
10963 \Hy@EndAnnot
10964 }
10965 \def\Acrobatmenu#1#2{%
10966 \Hy@Acrobatmenu{#1}{#2}{%
10967 \Hy@BeginAnnot{%
10968 \EdefEscapeName\Hy@temp@menu{#1}%
10969 \@pdfm@mark{%
10970 bann<<%
10971 /Type/Annot%
10972 /Subtype/Link%
10973 \ifHy@pdfa /F 4\fi
10974 \Hy@setpdfborder
10975 \Hy@setpdfhighlight
10976 \ifx\@menubordercolor\relax
10977 \else
10978 /C[\@menubordercolor]%
10979 \fi
10980 /A<<%
10981 /S/Named%
10982 /N/\Hy@temp@menu
10983 \Hy@href@nextactionraw
10984 >>%
10985 >>%
10986 }%
10987 \Hy@colorlink\@menucolor
10988 }%
10989 #2\Hy@xspace@end
10990 \Hy@EndAnnot
10991 }%
10992 }
10993
10994 \def\PDF@FinishDoc{%
10995 \Hy@UseMaketitleInfos
10996 \HyInfo@GenerateAddons
10997 \@pdfm@mark{%
10998 docinfo<<%
10999 /Title(\@pdftitle)%
11000 /Subject(\@pdfsubject)%
11001 /Creator(\@pdfcreator)%
11002 \ifx\@pdfcreationdate\@empty
11003 \else
11004 /CreationDate(\@pdfcreationdate)%
11005 \fi
11006 \ifx\@pdfmoddate\@empty
11007 \else
11008 /ModDate(\@pdfmoddate)%
11009 \fi
11010 /Author(\@pdfauthor)%
11011 \ifx\@pdfproducer\relax
11012 \else
11013 /Producer(\@pdfproducer)%
11014 \fi
11015 /Keywords(\@pdfkeywords)%
11016 \ifx\@pdftrapped\@empty

```

```

11017     \else
11018         /Trapped/\@pdftrapped
11019     \fi
11020     \HyInfo@Addons
11021     >>%
11022 }%
11023 \Hy@DisableOption{pdfauthor}%
11024 \Hy@DisableOption{pdftitle}%
11025 \Hy@DisableOption{pdfsubject}%
11026 \Hy@DisableOption{pdfcreator}%
11027 \Hy@DisableOption{addtopdfcreator}%
11028 \Hy@DisableOption{pdfcreationdate}%
11029 \Hy@DisableOption{pdfcreationdate}%
11030 \Hy@DisableOption{pdfmoddate}%
11031 \Hy@DisableOption{pdfproducer}%
11032 \Hy@DisableOption{pdfkeywords}%
11033 \Hy@DisableOption{pdftrapped}%
11034 \Hy@DisableOption{pdfinfo}%
11035 }

11036 \def\PDF@SetupDoc{%
11037     \edef\Hy@temp{%
11038         \ifHy@pdftoolbar\else /HideToolbar true\fi
11039         \ifHy@pdfmenubar\else /HideMenubar true\fi
11040         \ifHy@pdfwindowui\else /HideWindowUI true\fi
11041         \ifHy@pdfwindow /FitWindow true\fi
11042         \ifHy@pdfcenterwindow /CenterWindow true\fi
11043         \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11044         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11045         \Hy@UseNameKey{Direction}\@pdfdirection
11046         \Hy@UseNameKey{ViewArea}\@pdfviewarea
11047         \Hy@UseNameKey{ViewClip}\@pdfviewclip
11048         \Hy@UseNameKey{PrintArea}\@pdfprintarea
11049         \Hy@UseNameKey{PrintClip}\@pdfprintclip
11050         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11051         \Hy@UseNameKey{Duplex}\@pdfduplex
11052         \ifx\@pdfpicktraybypdfsize\@empty
11053             \else
11054                 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11055             \fi
11056         \ifx\@pdfprintpagerange\@empty
11057             \else
11058                 /PrintPageRange[\@pdfprintpagerange]%
11059             \fi
11060         \ifx\@pdfnumcopies\@empty
11061             \else
11062                 /NumCopies \@pdfnumcopies
11063             \fi
11064     }%
11065     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11066     \@pdfm@mark{%
11067         docview<<%
11068         \ifx\@pdfstartpage\@empty
11069             \else
11070                 \ifx\@pdfstartview\@empty
11071                     \else
11072                         /OpenAction[<@page\@pdfstartpage\@pdfstartview]%
11073                     \fi

```

```

11074 \fi
11075 \ifx\@baseurl\@empty
11076 \else
11077 /URI<</Base(\Hy@pstringB)>>%
11078 \fi
11079 /PageMode/\@pdfpagemode
11080 \ifx\Hy@temp\@empty
11081 \else
11082 /ViewerPreferences<<\Hy@temp>>%
11083 \fi
11084 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11085 \ifx\@pdflang\relax
11086 \else
11087 /Lang(\@pdflang)%
11088 \fi
11089 >>%
11090 }%
11091 \ifx\@pdfpagescrop\@empty
11092 \else
11093 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11094 \fi
11095 }
11096 </dvipdfm | xetex>
11097 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11098 \def\hyper@pagetransition{%
11099 \ifx\@pdfpagetransition\relax
11100 \else
11101 \ifx\@pdfpagetransition\@empty
11102 \else
11103 \special{pdf:put @thispage %
11104 <</Trans<</S/\@pdfpagetransition>>>>%
11105 }%
11106 \fi
11107 \fi
11108 }

```

\hyper@pageduration

```

11109 \def\hyper@pageduration{%
11110 \ifx\@pdfpageduration\relax
11111 \else
11112 \ifx\@pdfpageduration\@empty
11113 \else
11114 \special{pdf:put @thispage %
11115 <</Dur \@pdfpageduration>>>>%
11116 }%
11117 \fi
11118 \fi
11119 }

```

\hyper@pagehidden

```

11120 \def\hyper@pagehidden{%
11121 \ifHy@useHidKey
11122 \special{pdf:put @thispage %
11123 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11124 }%

```

```

11125 \fi
11126 }

11127 \g@addto@macro\Hy@EveryPageBoxHook{%
11128 \hyper@pagetransition
11129 \hyper@pageduration
11130 \hyper@pagehidden
11131 }

11132 </dvipdfm | xetex>

```

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

```

11133 <*dvipdfm>
11134 \AtBeginShipoutFirst{%
11135 \ifHy@setpagesize
11136 \begingroup
11137 \ifundefined{stockwidth}{%
11138 \ifdim\paperwidth>\z@
11139 \ifdim\paperheight>\z@
11140 \special{papersize=\the\paperwidth,\the\paperheight}%
11141 \fi
11142 \fi
11143 }{%
11144 \ifdim\stockwidth>\z@
11145 \ifdim\stockheight>\z@
11146 \special{papersize=\the\stockwidth,\the\stockheight}%
11147 \fi
11148 \fi
11149 }%
11150 \endgroup
11151 \fi
11152 \Hy@DisableOption{setpagesize}%
11153 }
11154 </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.

```

11155 <*vtexhtml>
11156 \providecommand*\XR@ext}{htm}
11157 \RequirePackage{vtexhtml}
11158 \newif\if@Localurl
11159 \let\PDF@FinishDoc\ltx@empty
11160 \def\PDF@SetupDoc{%
11161 \ifx\@baseurl\@empty
11162 \else
11163 \special{!direct <base href="\@baseurl">}%
11164 \fi
11165 }
11166 \def\@urltype{url}
11167 \def\hyper@link#1#2#3{%
11168 \Hy@VerboseLinkStart{#1}{#2}%
11169 \leavevmode
11170 \special{!direct <a href=%
11171 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11172 #3\Hy@xspace@end

```

```

11173 \special{!direct </a>}%
11174 }
11175 \def\hyper@linkurl#1#2{%
11176 \begingroup
11177 \hyper@chars
11178 \leavevmode
11179 \MathBSuppress=1\relax
11180 \special{!direct <a href=%
11181 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11182 #1\Hy@xspace@end
11183 \MathBSuppress=0\relax
11184 \special{!direct </a>}%
11185 \endgroup
11186 }
11187 \def\hyper@linkfile#1#2#3{%
11188 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11189 }
11190 \def\hyper@linkstart#1#2{%
11191 \Hy@VerboseLinkStart{#1}{#2}%
11192 \def\Hy@tempa{#1}\ifx\Hy@tempa \@urlltype
11193 \@Localurltrue
11194 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11195 \else
11196 \@Localurlfalse
11197 \begingroup
11198 \hyper@chars
11199 \special{!aref \HyperDestNameFilter{#2}}%
11200 \endgroup
11201 \fi
11202 }
11203 \def\hyper@linkend{%
11204 \if@Localurl
11205 \special{!endaref}%
11206 \else
11207 \special{!direct </a>}%
11208 \fi
11209 }
11210 \Hy@WrapperDef\hyper@anchorstart#1{%
11211 \Hy@SaveLastskip
11212 \Hy@VerboseAnchor{#1}%
11213 \begingroup
11214 \hyper@chars
11215 \special{!aname #1}%
11216 \special{!direct <a name=%
11217 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11218 \endgroup
11219 \Hy@activeanchortrue
11220 }
11221 \def\hyper@anchorend{%
11222 \special{!direct </a>}%
11223 \Hy@activeanchorfalse
11224 \Hy@RestoreLastskip
11225 }
11226 \Hy@WrapperDef\hyper@anchor#1{%
11227 \Hy@SaveLastskip
11228 \Hy@VerboseAnchor{#1}%
11229 \begingroup

```

```

11230 \let\protect=\string
11231 \hyper@chars
11232 \leavevmode
11233 \special{!aname #1}%
11234 \special{!direct <a name=%
11235     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11236 \endgroup
11237 \Hy@activeanchortrue
11238 \bgroup\anchor@spot\egroup
11239 \special{!direct </a>}}%
11240 \Hy@activeanchorfalse
11241 \Hy@RestoreLastskip
11242 }
11243 \def\@Form[#1]{%
11244 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11245 }
11246 \let\@endForm\ltx@empty
11247 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11248 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11249 }
11250 \def\@TextField[#1]#2{% parameters, label
11251 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11252 }
11253 \def\@CheckBox[#1]#2{% parameters, label
11254 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11255 }
11256 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11257 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11258 }
11259 \def\@PushButton[#1]#2{% parameters, label
11260 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11261 }
11262 \def\@Reset[#1]#2{%
11263 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11264 }
11265 \def\@Submit[#1]#2{%
11266 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11267 }
11268 </vtexhtml>
11269 <*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.

```

11270 \ifx\mediaheight\@undefined
11271 \else
11272 \ifx\mediaheight\relax
11273 \else
11274 \ifHy@setpagesize
11275 \providecommand*\VTeXInitMediaSize}{%
11276 \ltx@ifundefined{stockwidth}{%
11277 \ifdim\paperheight>0pt %
11278 \setlength\mediaheight\paperheight
11279 \fi
11280 \ifdim\paperheight>0pt %
11281 \setlength\mediawidth\paperwidth
11282 \fi

```

```

11283     }{%
11284         \ifdim\stockheight>0pt %
11285             \setlength\mediaheight\stockheight
11286         \fi
11287         \ifdim\stockwidth>0pt %
11288             \setlength\mediawidth\stockwidth
11289         \fi
11290     }%
11291 }%
11292 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11293 \fi
11294 \Hy@DisableOption{setpagesize}%
11295 \fi
11296 \fi

Older versions of VTeX require xyz in lower case.

11297 \providecommand*\@pdfview{xyz}
11298 \providecommand*\@pdfborder{0 0 1}
11299 \providecommand*\@pdfborderstyle{}
11300 \let\CurrentBorderColor\@linkbordercolor
11301 \Hy@WrapperDef\hyper@anchor#1{%
11302     \Hy@SaveLastskip
11303     \Hy@VerboseAnchor{#1}%
11304     \begingroup
11305         \let\protect=\string
11306         \hyper@chars
11307         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11308     \endgroup
11309     \Hy@activeanchortrue
11310     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11311     \Hy@activeanchorfalse
11312     \Hy@RestoreLastskip
11313 }
11314 \Hy@WrapperDef\hyper@anchorstart#1{%
11315     \Hy@SaveLastskip
11316     \Hy@VerboseAnchor{#1}%
11317     \begingroup
11318         \hyper@chars
11319         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11320     \endgroup
11321     \Hy@activeanchortrue
11322 }
11323 \def\hyper@anchorend{%
11324     \Hy@activeanchorfalse
11325     \Hy@RestoreLastskip
11326 }
11327 \def\@urltype{url}
11328 \def\Hy@undefinedname{UNDEFINED}
11329 \def\hyper@linkstart#1#2{%
11330     \Hy@VerboseLinkStart{#1}{#2}%
11331     \Hy@pstringdef\Hy@pstringURI{#2}%
11332     \expandafter\Hy@colorlink\csname @#1color\endcsname
11333     \ltx@ifundefined{#1bordercolor}{%
11334         \let\CurrentBorderColor\relax
11335     }{%
11336         \edef\CurrentBorderColor{%
11337             \csname @#1bordercolor\endcsname
11338         }%

```

```

11339 }%
11340 \def\Hy@tempa{#1}%
11341 \ifx\Hy@tempa\@urltype
11342 \special{!%
11343   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11344   \ifHy@href@ismap
11345     /IsMap true%
11346   \fi
11347   \Hy@href@nextactionraw
11348   >%
11349   a=<%
11350   \ifHy@pdfa /F 4\fi
11351   \Hy@setpdfborder
11352   \ifx\CurrentBorderColor\relax
11353   \else
11354     /C [\CurrentBorderColor]%
11355   \fi
11356   >%
11357 }%
11358 \else
11359 \protected@edef\Hy@testname{#2}%
11360 \ifx\Hy@testname\@empty
11361 \Hy@Warning{%
11362   Empty destination name,\MessageBreak
11363   using '\Hy@undefinedname'%
11364 }%
11365 \let\Hy@testname\Hy@undefinedname
11366 \fi
11367 \special{!%
11368   aref \expandafter\HyperDestNameFilter
11369   \expandafter{\Hy@testname};%
11370   a=<%
11371   \ifHy@pdfa /F 4\fi
11372   \Hy@setpdfborder
11373   \ifx\CurrentBorderColor\relax
11374   \else
11375     /C [\CurrentBorderColor]%
11376   \fi
11377   >%
11378 }%
11379 \fi
11380 }
11381 \def\hyper@linkend{%
11382 \special{!endaref}%
11383 \Hy@endcolorlink
11384 }
11385 \def\hyper@linkfile#1#2#3{%
11386 \leavevmode
11387 \def\Hy@pstringF{#2}%
11388 \Hy@CleanupFile\Hy@pstringF
11389 \special{!%
11390   aref <%
11391   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11392   f=\Hy@pstringF>#3;%
11393   a=<%
11394   \ifHy@pdfa /F 4\fi
11395   \Hy@setpdfborder

```



```

11396 \ifx\@filebordercolor\relax
11397 \else
11398 /C [\@filebordercolor]%
11399 \fi
11400 >%
11401 }%
11402 \Hy@colorlink\@filecolor
11403 #1\Hy@xspace@end
11404 \Hy@endcolorlink
11405 \special{!endaref}%
11406 }
11407 \def\hyper@linkurl#1#2{%
11408 \begingroup
11409 \Hy@pstringdef\Hy@pstringURI{#2}%
11410 \hyper@chars
11411 \leavevmode
11412 \special{!%
11413 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11414 \ifHy@href@ismap
11415 /IsMap true%
11416 \fi
11417 \Hy@href@nextactionraw
11418 >;%
11419 a=<%
11420 \ifHy@pdfa /F 4\fi
11421 \Hy@setpdfborder
11422 \ifx\@urlbordercolor\relax
11423 \else
11424 /C [\@urlbordercolor]%
11425 \fi
11426 >%
11427 }%
11428 \Hy@colorlink\@urlcolor
11429 #1\Hy@xspace@end
11430 \Hy@endcolorlink
11431 \special{!endaref}%
11432 \endgroup
11433 }
11434 \def\hyper@link#1#2#3{%
11435 \Hy@VerboseLinkStart{#1}{#2}%
11436 \ltx@ifundefined{c#1bordercolor}{%
11437 \let\CurrentBorderColor\relax
11438 }{%
11439 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11440 }%
11441 \leavevmode
11442 \protected@edef\Hy@testname{#2}%
11443 \ifx\Hy@testname\@empty
11444 \Hy@Warning{%
11445 Empty destination name,\MessageBreak
11446 using ``\Hy@undefinedname'%
11447 }%
11448 \let\Hy@testname\Hy@undefinedname
11449 \fi
11450 \special{!%
11451 aref \expandafter\HyperDestNameFilter
11452 \expandafter{\Hy@testname};%

```

```

11453   a=<%
11454       \ifHy@pdfa /F 4\fi
11455       \Hy@setpdfborder
11456       \ifx\CurrentBorderColor\relax
11457       \else
11458       /C [\CurrentBorderColor]%
11459       \fi
11460   >%
11461 }%
11462 \expandafter
11463 \Hy@colorlink\csname @#1color\endcsname
11464   #3\Hy@xspace@end
11465 \Hy@endcolorlink
11466 \special{!endaref}%
11467 }
11468 \def\hyper@image#1#2{%
11469 \hyper@linkurl{#2}{#1}%
11470 }
11471 \def\@hyper@launch run:#1\#2#3{%
11472 \Hy@pstringdef\Hy@pstringF{#1}%
11473 \Hy@pstringdef\Hy@pstringP{#3}%
11474 \leavevmode
11475 \special{!aref %
11476   <u=%
11477     /Type/Action%
11478     /S/Launch%
11479     /F(\Hy@pstringF)%
11480     \Hy@SetNewWindow
11481     \ifx\#3\%
11482     \else
11483     /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11484     \fi
11485     \Hy@href@nextactionraw
11486   >,%
11487   a=<%
11488       \ifHy@pdfa /F 4\fi
11489       \Hy@setpdfborder
11490       \ifx\@runbordercolor\relax
11491       \else
11492       /C[\@runbordercolor]%
11493       \fi
11494   >%
11495 }%
11496 \Hy@colorlink\@runcolor
11497   #2\Hy@xspace@end
11498 \Hy@endcolorlink
11499 \special{!endaref}%
11500 }
11501 \def\Acrobatmenu#1#2{%
11502 \EdefEscapeName\Hy@temp@menu{#1}%
11503 \Hy@Acrobatmenu{#1}{#2}{%
11504 \special{!%
11505   aref <u=/S /Named /N /\Hy@temp@menu>;%
11506   a=<%
11507       \ifHy@pdfa /F 4\fi
11508       \Hy@setpdfborder
11509       \ifx\@menubordercolor\relax

```

```

11510     \else
11511         /C[\@menubordercolor]%
11512     \fi
11513     >%
11514 }%
11515 \Hy@colorlink\@menucolor
11516 #2\Hy@xspace@end
11517 \Hy@endcolorlink
11518 \special{!endaref}%
11519 }%
11520 }

```

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

The code below makes sense for V_TE_X 7.02 or later.

Please never use \@ifundefined{V_TE_Xversion}{..}{..} *globally*.

```

11521 \ifnum\Hy@VTeXversion<702 %
11522 \else
11523 \def\hyper@pagetransition{%
11524 \ifx\@pdfpagetransition\relax
11525 \else
11526 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

11527 \else
11528 \hvtex@parse@trans\@pdfpagetransition
11529 \fi
11530 \fi
11531 }%

```

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

Syntax of V_TE_X \special{!trans <transition_effect>}:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                     <Dissolve_effect> | <Glitter_effect> |
                     <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

11532 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11533 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11534 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11535 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11536 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11537 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11538 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```
11539 \def\hvtex@par@dimension{/Dm}%
11540 \def\hvtex@par@direction{/Di}%
11541 \def\hvtex@par@duration{/D}%
11542 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11543 \def\hvtex@gettoken{%
11544   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11545 }%
```

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

```
11546 \def\hvtex@gettoken@#1 #2\@nil{%
11547   \edef\hvtex@token{#1}%
11548   \edef\hvtex@buffer{#2}%
11549 }%
11550 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11551 \let\hvtex@trans@code\@empty
11552 \let\hvtex@param@dimension\@empty
11553 \let\hvtex@param@direction\@empty
11554 \let\hvtex@param@duration\@empty
11555 \let\hvtex@param@motion\@empty
11556 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11557 \hvtex@gettoken
11558 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11559 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11560 \else
11561   \hvtex@gettoken
11562 \fi
11563 \fi
11564 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11565 \hvtex@trans@params
11566 }%
```

Reentrant macro to parse optional parameters.

```
11567 \def\hvtex@trans@params{%
11568   \ifx\hvtex@buffer\@empty
11569   \else
11570     \hvtex@gettoken
11571     \let\hvtex@trans@par\hvtex@token
11572     \ifx\hvtex@buffer\@empty
11573     \else
11574       \hvtex@gettoken
11575       \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
11576       \let\hvtex@param@duration\hvtex@token
11577     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11578      \expandafter\edef\expandafter\hvtex@param@motion
11579      \expandafter{\expandafter\@gobble\hvtex@token}%
11580      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11581      \expandafter\edef\expandafter\hvtex@param@dimension
11582      \expandafter{\expandafter\@gobble\hvtex@token}%
11583      \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).

```
11584      \let\hvtex@param@direction\hvtex@token
11585      \fi\fi\fi\fi
11586      \fi
11587      \fi
11588      \ifx\hvtex@buffer\@empty
11589      \let\next\hvtex@produce@trans
11590      \else
11591      \let\next\hvtex@trans@params
11592      \fi
11593      \next
11594 }%
```

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

```
11595 \def\hvtex@produce@trans{%
11596   \let\vtex@trans@special\@empty
11597   \if S\hvtex@trans@code
11598     \edef\vtex@trans@special{\hvtex@trans@code
11599       \hvtex@param@dimension\hvtex@param@motion}%
11600   \else\if B\hvtex@trans@code
11601     \edef\vtex@trans@special{%
11602       \hvtex@trans@code\hvtex@param@dimension
11603     }%
11604   \else\if X\hvtex@trans@code
11605     \edef\vtex@trans@special{%
11606       \hvtex@trans@code\hvtex@param@motion
11607     }%
11608   \else\if W\hvtex@trans@code
11609     \edef\vtex@trans@special{%
11610       \hvtex@trans@code\hvtex@param@direction
11611     }%
11612   \else\if D\hvtex@trans@code
11613     \let\vtex@trans@special\hvtex@trans@code
11614   \else\if R\hvtex@trans@code
11615     \let\vtex@trans@special\hvtex@trans@code
11616   \else\if G\hvtex@trans@code
11617     \edef\vtex@trans@special{%
11618       \hvtex@trans@code\hvtex@param@direction
11619     }%
11620   \fi\fi\fi\fi\fi\fi
11621   \ifx\vtex@trans@special\@empty
11622   \else
11623     \ifx\hvtex@param@duration\@empty
11624     \else
11625       \setlength{\dimen@}{\hvtex@param@duration\p@}%
```

I'm not guilty of possible overflow.

```

11626 \multiply\dimen@ \@m
11627 \edef\vtex@trans@special{%
11628 \vtex@trans@special,\strip@pt\dimen@
11629 }%
11630 \fi

```

And all the mess is just for this.

```

11631 \special{!trans \vtex@trans@special}%
11632 \fi
11633 }%

11634 \def\hyper@pageduration{%
11635 \ifx\@pdfpageduration\relax
11636 \else
11637 \ifx\@pdfpageduration\@empty
11638 \special{!duration-}%
11639 \else
11640 \special{!duration \@pdfpageduration}%
11641 \fi
11642 \fi
11643 }%

11644 \def\hyper@pagehidden{%
11645 \ifHy@useHidKey
11646 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11647 \fi
11648 }%

11649 \g@addto@macro\Hy@EveryPageBoxHook{%
11650 \hyper@pagetransition
11651 \hyper@pageduration
11652 \hyper@pagehidden
11653 }%
11654 \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

```

11655 \ifx\@pdfproducer\relax
11656 \def\@pdfproducer{VTeX}%
11657 \ifnum\Hy@VTeXversion>\z@
11658 \count@\VTeXversion
11659 \divide\count@ 100 %
11660 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11661 \multiply\count@ -100 %
11662 \advance\count@\VTeXversion
11663 \edef\@pdfproducer{%
11664 \@pdfproducer
11665 .\ifnum\count@<10 0\fi\the\count@
11666 \ifx\VTeXOS\@undefined\else
11667 \ifnum\VTeXOS>0 %
11668 \ifnum\VTeXOS<6 %
11669 \space%

```

```

11670         \ifcase\VTeXOS
11671         \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11672         \fi
11673     )%
11674 \fi
11675 \fi
11676 \fi
11677 ,\space
11678 \ifnum\OpMode=\@one PDF\else PS\fi
11679 \space backend%
11680 \ifx\gexmode\@undefined\else
11681 \ifnum\gexmode>\z@\space with GeX\fi
11682 \fi
11683 }%
11684 \fi
11685 \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).

```

11686 \def\PDF@SetupDoc{%
11687 \ifx\@pdfpagescrop\@empty
11688 \else
11689 \special{!pdfinfo b=<\@pdfpagescrop>}%
11690 \fi
11691 \ifx\@pdfstartpage\@empty
11692 \else
11693 \ifx\@pdfstartview\@empty
11694 \else
11695 \special{!onopen Page\@pdfstartpage}%
11696 \fi
11697 \fi
11698 \special{!pdfinfo p=</\@pdfpagemode>}%
11699 \ifx\@baseurl\@empty
11700 \else
11701 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11702 \fi
11703 \special{!pdfinfo v=<<<%
11704 \ifHy@pdftoolbar\else /HideToolbar true\fi
11705 \ifHy@pdfmenubar\else /HideMenubar true\fi
11706 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11707 \ifHy@pdffitwindow /FitWindow true\fi
11708 \ifHy@pdfcenterwindow /CenterWindow true\fi
11709 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11710 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11711 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

11712 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11713 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11714 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11715 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11716 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11717 \Hy@UseNameKey{Duplex}\@pdfduplex
11718 \ifx\@pdfpicktraybypdfsize\@empty
11719 \else
11720 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11721 \fi
11722 \ifx\@pdfprintpagerange\@empty
11723 \else
11724 /PrintPageRange[\@pdfprintpagerange]%
11725 \fi
11726 \ifx\@pdfnumcopies\@empty
11727 \else
11728 /NumCopies \@pdfnumcopies
11729 \fi
11730 >>>}%
11731 \ifx\@pdfpagelayout\@empty
11732 \else
11733 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11734 \fi
11735 }%
11736 \HyInfo@AddonUnsupportedtrue
11737 \define@key{Hyp}{pdfcreationdate}{%
11738 \Hy@Warning{%
11739 VTeX does not support pdfcreationdate.\MessageBreak
11740 Therefore its setting is ignored%
11741 }%
11742 }
11743 \define@key{Hyp}{pdfmoddate}{%
11744 \Hy@Warning{%
11745 VTeX does not support pdfmoddate.\MessageBreak
11746 Therefore its setting is ignored%
11747 }%
11748 }
11749 \def\PDF@FinishDoc{%
11750 \Hy@UseMaketitleInfos
11751 \HyInfo@TrappedUnsupported
11752 \special{!pdfinfo a=<\@pdfauthor>}%
11753 \special{!pdfinfo t=<\@pdftitle>}%
11754 \special{!pdfinfo s=<\@pdfsubject>}%
11755 \special{!pdfinfo c=<\@pdfcreator>}%
11756 \ifx\@pdfproducer\relax
11757 \else
11758 \special{!pdfinfo r=<\@pdfproducer>}%
11759 \fi
11760 \special{!pdfinfo k=<\@pdfkeywords>}%
11761 \Hy@DisableOption{pdfauthor}%
11762 \Hy@DisableOption{pdftitle}%
11763 \Hy@DisableOption{pdfsubject}%
11764 \Hy@DisableOption{pdfcreator}%
11765 \Hy@DisableOption{addtopdfcreator}%
11766 \Hy@DisableOption{pdfcreationdate}%
11767 \Hy@DisableOption{pdfcreationdate}%
11768 \Hy@DisableOption{pdfmoddate}%

```



```

11769 \Hy@DisableOption{pdfproducer}%
11770 \Hy@DisableOption{pdfkeywords}%
11771 \Hy@DisableOption{pdftrapped}%
11772 \Hy@DisableOption{pdfinfo}%
11773 }
11774 </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.

```

11775 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11776 <package>\providecommand*{\Hy@DistillerDestFix}{}
11777 <*pdfmark | dviwindo>
11778 \def\Hy@DistillerDestFix{%
11779   \begingroup
11780   \let\x\literalps@out

```

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

```

11781   \ifnum \@ifundefined{OpMode}{0}{}%
11782     \@ifundefined{gexmode}{0}{}%
11783     \ifnum\gexmode>0 \OpMode\else 0\fi
11784   }>1 %
11785   \def\x##1{%
11786     \immediate\special{!=##1}%
11787   }%
11788   \fi
11789   \x{%
11790     /product where{%
11791       pop %
11792       product(Distiller)search{%
11793         pop pop pop %
11794         version(.)search{%
11795           exch pop exch pop%
11796           (3011)eq{%
11797             gsave %
11798             newpath 0 0 moveto closepath clip%
11799             /Courier findfont 10 scalefont setfont %
11800             72 72 moveto(.)show %
11801             grestore%
11802           }if%
11803         }{pop}ifelse%
11804       }{pop}ifelse%
11805     }if%
11806   }%
11807   \endgroup
11808 }
11809 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```
11810 (*pdfmark)
11811 \Hy@breaklinks@unsupported
11812 \def\HyPat@ObjRef{%
11813   \[~{}]+\}%
11814 }
11815 \Hy@WrapperDef\hyper@anchor#1{%
11816   \Hy@SaveLastskip
11817   \Hy@VerboseAnchor{#1}%
11818   \begingroup
11819     \pdfmark[\anchor@spot]{%
11820       pdfmark=/DEST,%
11821       linktype=anchor,%
11822       View=/\@pdfview \@pdfviewparams,%
11823       DestAnchor={#1}%
11824     }%
11825   \endgroup
11826   \Hy@RestoreLastskip
11827 }
11828 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11829 \Hy@WrapperDef\hyper@anchorstart#1{%
11830   \Hy@SaveLastskip
11831   \Hy@VerboseAnchor{#1}%
11832   \literalps@out{H.S}%
11833   \Hy@AllowHyphens
11834   \xdef\hyper@currentanchor{#1}%
11835   \Hy@activeanchortrue
11836 }
11837 \def\hyper@anchorend{%
11838   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11839   \pdfmark{%
11840     pdfmark=/DEST,%
11841     linktype=anchor,%
11842     View=/\@pdfview \@pdfviewparams,%
11843     DestAnchor=\hyper@currentanchor,%
11844   }%
11845   \Hy@activeanchorfalse
11846   \Hy@RestoreLastskip
11847 }
11848 \def\hyper@linkstart#1#2{%
11849   \Hy@VerboseLinkStart{#1}{#2}%
11850   \ifHy@breaklinks
11851     \else
11852     \leavevmode
```

```

11853 \ifmmode
11854   \def\Hy@LinkMath{$}%
11855 \else
11856   \let\Hy@LinkMath\ltx@empty
11857 \fi
11858 \Hy@SaveSpaceFactor
11859 \hbox\bgroup
11860 \Hy@RestoreSpaceFactor
11861 \Hy@LinkMath
11862 \fi
11863 \expandafter\Hy@colorlink\csname @#1color\endcsname
11864 \literalps@out{H.S}%
11865 \Hy@AllowHyphens
11866 \xdef\hyper@currentanchor{#2}%
11867 \gdef\hyper@currentlinktype{#1}%
11868 }
11869 \def\hyper@linkend{%
11870   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11871   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11872     \let\Hy@tempcolor\relax
11873   }{%
11874     \edef\Hy@tempcolor{%
11875       \csname @\hyper@currentlinktype bordercolor\endcsname
11876     }%
11877   }%
11878   \pdfmark{%
11879     pdfmark=/ANN,%
11880     linktype=link,%
11881     Subtype=/Link,%
11882     PDFAFlags=4,%
11883     Dest=\hyper@currentanchor,%
11884     AcroHighlight=\@pdfhighlight,%
11885     Border=\@pdfborder,%
11886     BorderStyle=\@pdfborderstyle,%
11887     Color=\Hy@tempcolor,%
11888     Raw=H.B%
11889   }%
11890   \Hy@endcolorlink
11891   \ifHy@breaklinks
11892   \else
11893     \Hy@LinkMath
11894     \Hy@SaveSpaceFactor
11895     \egroup
11896     \Hy@RestoreSpaceFactor
11897   \fi
11898 }

```

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.

```

11899 \begingroup
11900 \catcode`P=12 %
11901 \catcode`T=12 %
11902 \lowercase{\endgroup
11903 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11904 }
11905 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
11906 \def\hyper@pagetransition{%
11907   \ifx\@pdfpagetransition\relax
11908   \else
11909     \ifx\@pdfpagetransition\@empty
11910       % 1. Does an old entry have to be deleted?
11911       % 2. If 1=yes, how to delete?
11912     \else
11913       \pdfmark{%
11914         pdfmark=/PUT,%
11915         Raw={%
11916           \string{ThisPage\string}%
11917           <</Trans << /S /\@pdfpagetransition\space >> >>%
11918         }%
11919       }%
11920     \fi
11921   \fi
11922 }
```

\hyper@pageduration

```
11923 \def\hyper@pageduration{%
11924   \ifx\@pdfpageduration\relax
11925   \else
11926     \ifx\@pdfpageduration\@empty
11927       % 1. Does an old entry have to be deleted?
11928       % 2. If 1=yes, how to delete?
11929     \else
11930       \pdfmark{%
11931         pdfmark=/PUT,%
11932         Raw={%
11933           \string{ThisPage\string}%
11934           <</Dur \@pdfpageduration>>%
11935         }%
11936       }%
11937     \fi
11938   \fi
11939 }
```

\hyper@pagehidden

```
11940 \def\hyper@pagehidden{%
11941   \ifHy@useHidKey
11942     \pdfmark{%
11943       pdfmark=/PUT,%
11944       Raw={%
11945         \string{ThisPage\string}%
11946         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11947       }%
11948     }%
11949   \fi
11950 }

11951 \g@addto@macro\Hy@EveryPageBoxHook{%
11952   \hyper@pagetransition
11953   \hyper@pageduration
11954   \hyper@pagehidden
11955 }

11956 \def\hyper@image#1#2{%
```

```

11957 \hyper@linkurl{#2}{#1}%
11958 }
11959 \def\Hy@undefinedname{UNDEFINED}
11960 \def\hyper@link#1#2#3{%
11961 \Hy@VerboseLinkStart{#1}{#2}%
11962 \ltx@ifundefined{#1bordercolor}{%
11963 \let\Hy@tempcolor\relax
11964 }{%
11965 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11966 }%
11967 \begingroup
11968 \protected@edef\Hy@testname{#2}%
11969 \ifx\Hy@testname\@empty
11970 \Hy@Warning{%
11971 Empty destination name,\MessageBreak
11972 using '\Hy@undefinedname'%
11973 }%
11974 \let\Hy@testname\Hy@undefinedname
11975 \fi
11976 \pdfmark[{#3}]{%
11977 Color=\Hy@tempcolor,%
11978 linktype={#1},%
11979 AcroHighlight=\@pdfhighlight,%
11980 Border=\@pdfborder,%
11981 BorderStyle=\@pdfborderstyle,%
11982 pdfmark=/ANN,%
11983 Subtype=/Link,%
11984 PDFAFlags=4,%
11985 Dest=\Hy@testname
11986 }%
11987 \endgroup
11988 }
11989 \newtoks\pdf@docset
11990 \def\PDF@FinishDoc{%
11991 \Hy@UseMaketitleInfos
11992 \Hy@Info@GenerateAddons
11993 \let\Hy@temp\@empty
11994 \ifx\@pdfcreationdate\@empty
11995 \else
11996 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11997 \fi
11998 \ifx\@pdfmoddate\@empty
11999 \else
12000 \expandafter\def\expandafter\Hy@temp\expandafter{%
12001 \Hy@temp
12002 ModDate=\@pdfmoddate,%
12003 }%
12004 \fi
12005 \ifx\@pdfproducer\relax
12006 \else
12007 \expandafter\def\expandafter\Hy@temp\expandafter{%
12008 \Hy@temp
12009 Producer=\@pdfproducer,%
12010 }%
12011 \fi
12012 \expandafter
12013 \pdfmark\expandafter{%

```

```

12014 \Hy@temp
12015 pdfmark=/DOCINFO,%
12016 Title=\@pdftitle,%
12017 Subject=\@pdfsubject,%
12018 Creator=\@pdfcreator,%
12019 Author=\@pdfauthor,%
12020 Keywords=\@pdfkeywords,%
12021 Trapped=\@pdftrapped
12022 }%
12023 \ifx\HyInfo@Addons\@empty
12024 \else
12025 \pdfmark{%
12026 pdfmark=/DOCINFO,%
12027 Raw={\HyInfo@Addons}%
12028 }%
12029 \fi
12030 \Hy@DisableOption{pdfauthor}%
12031 \Hy@DisableOption{pdftitle}%
12032 \Hy@DisableOption{pdfsubject}%
12033 \Hy@DisableOption{pdfcreator}%
12034 \Hy@DisableOption{addtopdfcreator}%
12035 \Hy@DisableOption{pdfcreationdate}%
12036 \Hy@DisableOption{pdfcreationdate}%
12037 \Hy@DisableOption{pdfmoddate}%
12038 \Hy@DisableOption{pdfproducer}%
12039 \Hy@DisableOption{pdfkeywords}%
12040 \Hy@DisableOption{pdftrapped}%
12041 \Hy@DisableOption{pdfinfo}%
12042 }
12043 \def\PDF@SetupDoc{%
12044 \def\Hy@temp{}%
12045 \ifx\@pdfstartpage\@empty
12046 \else
12047 \ifx\@pdfstartview\@empty
12048 \else
12049 \edef\Hy@temp{%
12050 ,Page=\@pdfstartpage
12051 ,View=\@pdfstartview
12052 }%
12053 \fi
12054 \fi
12055 \edef\Hy@temp{%
12056 \noexpand\pdfmark{%
12057 pdfmark=/DOCVIEW,%
12058 PageMode=/\@pdfpagemode
12059 \Hy@temp
12060 }%
12061 }%
12062 \Hy@temp
12063 \ifx\@pdfpagescrop\@empty
12064 \else
12065 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12066 \fi
12067 \edef\Hy@temp{%
12068 \ifHy@pdftoolbar\else /HideToolbar true\fi
12069 \ifHy@pdfmenubar\else /HideMenubar true\fi
12070 \ifHy@pdfwindowui\else /HideWindowUI true\fi

```

```

12071 \ifHy@pdffitwindow /FitWindow true\fi
12072 \ifHy@pdfcenterwindow /CenterWindow true\fi
12073 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12074 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12075 \Hy@UseNameKey{Direction}\@pdfdirection
12076 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12077 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12078 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12079 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12080 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12081 \Hy@UseNameKey{Duplex}\@pdfduplex
12082 \ifx\@pdfpicktraybypdfsize\@empty
12083 \else
12084 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12085 \fi
12086 \ifx\@pdfprintpagerange\@empty
12087 \else
12088 /PrintPageRange[\@pdfprintpagerange]%
12089 \fi
12090 \ifx\@pdfnumcopies\@empty
12091 \else
12092 /NumCopies \@pdfnumcopies
12093 \fi
12094 }%
12095 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12096 \pdfmark{%
12097 pdfmark=/PUT,%
12098 Raw={%
12099 \string{Catalog\string}<<%
12100 \ifx\Hy@temp\@empty
12101 \else
12102 /ViewerPreferences<<\Hy@temp>>%
12103 \fi
12104 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12105 \ifx\@pdflang\relax
12106 \else
12107 /Lang(\@pdflang)%
12108 \fi
12109 \ifx\@baseurl\@empty
12110 \else
12111 /URI<</Base(\Hy@pstringB)>>%
12112 \fi
12113 >>%
12114 }%
12115 }%
12116 }
12117 </pdfmark>
12118 <*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.

```

12119 \newif\ifHy@pdfmarkerror
12120 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}

```

```

12121 \def\pdfmark@[#1]#2{%
12122   \Hy@pdfmarkerrorfalse
12123   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12124   \@processme
12125   \let\pdf@type\relax
12126   \let\pdf@objdef\ltx@empty
12127   \kvsetkeys{PDF}{#2}%
12128   \ifHy@pdfmarkerror
12129   \else
12130     \ifx\pdf@type\relax
12131       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12132       \ifx\#1\%
12133       \else
12134         \pdf@rect{#1}%
12135       \fi
12136     \else
12137       \ifx\#1\%
12138       \literalps@out{%
12139         [%
12140         \ifx\pdf@objdef\ltx@empty
12141         \else
12142           /_objdef\string{\pdf@objdef\string}%
12143         \fi
12144         \the\pdf@toks\space\pdf@type\space pdfmark%
12145       ]%
12146     \else
12147       \ltx@ifundefined{@\pdf@linktype color}{%
12148         \Hy@colorlink\@linkcolor
12149       }{%
12150         \expandafter\Hy@colorlink
12151           \csname @\pdf@linktype color\endcsname
12152       }%
12153       \pdf@rect{#1}%
12154       \literalps@out{%
12155         [%
12156         \ifx\pdf@objdef\ltx@empty
12157         \else
12158           /_objdef\string{\pdf@objdef\string}%
12159         \fi
12160         \the\pdf@toks\space\pdf@type\space pdfmark%
12161       ]%
12162       \Hy@endcolorlink
12163     \fi
12164   \fi
12165 \fi
12166 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:


```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

12167 \newsavebox{\pdf@box}
12168 \providecommand*{\Hy@setouterhbox}{\sbox}
12169 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12170 \def\Hy@DEST{/DEST}
12171 \def\pdf@rect#1{%
12172   \begingroup
12173     \chardef\x=1 %
12174     \def\Hy@temp{#1}%
12175     \ifx\Hy@temp\ltx@empty
12176       \chardef\x=0 %
12177     \else
12178       \def\y{\anchor@spot}%
12179       \ifx\Hy@temp\y
12180         \def\y{\relax}%
12181       \ifx\anchor@spot\y
12182         \chardef\x=0 %
12183       \fi
12184     \fi
12185   \fi
12186 \expandafter\endgroup
12187 \ifcase\x
12188   \literalps@out{H.S}%
12189   \literalps@out{H.R}%
12190 \else
12191   \leavevmode
12192   \Hy@SaveSpaceFactor
12193   \ifmmode
12194     \def\Hy@LinkMath{$}%
12195   \else
12196     \let\Hy@LinkMath\ltx@empty
12197   \fi
12198   \ifHy@breaklinks
12199     \Hy@setouterhbox\pdf@box{%
12200       \Hy@RestoreSpaceFactor
12201       \Hy@LinkMath
12202       \Hy@AllowHyphens#1\Hy@xspace@end
12203       \Hy@LinkMath
12204       \Hy@SaveSpaceFactor
12205     }%
12206   \else
12207     \sbox\pdf@box{%
12208       \Hy@RestoreSpaceFactor
12209       \Hy@LinkMath
12210       #1\Hy@xspace@end
12211       \Hy@LinkMath
12212       \Hy@SaveSpaceFactor
12213     }%
12214   \fi
12215   \dimen@ht\pdf@box
12216   \ifdim\dp\pdf@box=\z@
12217     \literalps@out{H.S}%
12218   \else
12219     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12220   \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...).

```

12221 \ifHy@breaklinks
12222 \ifhmode
12223 \Hy@breaklinksunhbox\pdf@box
12224 \else
12225 \box\pdf@box
12226 \fi
12227 \else
12228 \expandafter\box\pdf@box
12229 \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

12230 \ifdim\dimen@=\z@
12231 \literalps@out{H.R}%
12232 \else
12233 \raise\dimen@\hbox{\literalps@out{H.R}}%
12234 \fi
12235 \Hy@RestoreSpaceFactor
12236 \fi
12237 \ifx\pdf@type\Hy@DEST
12238 \else
12239 \pdf@addtoksx{H.B}%
12240 \fi
12241 }

```

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.

```

12242 \newtoks\pdf@toks
12243 \newtoks\pdf@defaulttoks
12244 \pdf@defaulttoks={}%
12245 \def\pdf@addtoks#1#2{%
12246 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12247 \@processme
12248 }
12249 \def\pdf@addtoksx#1{%
12250 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12251 \@processme
12252 }
12253 \def\PDFdefaults#1{%
12254 \pdf@defaulttoks={#1}%
12255 }

```

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

```

12256 % what is the type of pdfmark?
12257 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12258 % what is the link type?
12259 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12260 \def\pdf@linktype{link}
12261 % named object?
12262 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12263 \let\pdf@objdef\ltx@empty
12264 % parameter is a stream of PDF
12265 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}

```

```

12266 % parameter is a name
12267 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12268 % parameter is a array
12269 \define@key{PDF}{Border}{%
12270   \edef\Hy@temp{#1}%
12271   \ifx\Hy@temp\@empty
12272   \else
12273     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12274   \fi
12275 }
12276 \let\Hy@BorderArrayPatch\@empty
12277 % parameter is a dictionary
12278 \define@key{PDF}{BorderStyle}{%
12279   \edef\Hy@temp{#1}%
12280   \ifx\Hy@temp\@empty
12281   \else
12282     \pdf@addtoks{<<#1>>}{BS}%
12283   \fi
12284 }
12285 % parameter is a array
12286 \define@key{PDF}{Color}{%
12287   \ifx\relax#1\relax
12288   \else
12289     \pdf@addtoks{[#1]}{Color}% hash-ok
12290   \fi
12291 }
12292 % parameter is a string
12293 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12294 % parameter is a integer
12295 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12296 % parameter is a array
12297 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12298 % parameter is a string
12299 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12300 % parameter is a string or file
12301 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12302 % parameter is a destination
12303 \define@key{PDF}{Dest}{%
12304   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12305   \ifx\Hy@pstringDest\@empty
12306     \Hy@pdfmarkerrortrue
12307     \Hy@Warning{Destination with empty name ignored}%
12308   \else
12309     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12310   \fi
12311 }
12312 \define@key{PDF}{DestAnchor}{%
12313   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12314   \ifx\Hy@pstringDest\@empty
12315     \Hy@pdfmarkerrortrue
12316     \Hy@Warning{Destination with empty name ignored}%
12317   \else
12318     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12319   \fi
12320 }
12321 % parameter is a string
12322 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}

```

```

12323 % parameter is a string
12324 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12325 % parameter is a int
12326 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12327 \define@key{PDF}{PDFAFlags}{%
12328   \ifHy@pdfa
12329     \pdf@addtoks{#1}{F}%
12330   \fi
12331 }
12332 % parameter is a name
12333 \define@key{PDF}{AcroHighlight}{%
12334   \begingroup
12335     \edef\x{#1}%
12336     \expandafter\endgroup\ifx\x@empty
12337       \else
12338         \pdf@addtoks{#1}{H}%
12339       \fi
12340 }
12341 % parameter is a string
12342 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12343 % parameter is a string
12344 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12345 % parameter is a string
12346 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12347 % parameter is a string
12348 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12349 % parameter is a Boolean
12350 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12351 % parameter is a integer or name
12352 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12353 % parameter is a name
12354 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12355 % parameter is a string
12356 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12357 % parameter is a array
12358 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12359 % parameter is a integer
12360 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12361 % parameter is a name
12362 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12363 % parameter is a string
12364 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12365 % parameter is a string
12366 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12367 % parameter is a string
12368 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
12369 % parameter is an array
12370 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12371 % parameter is a string
12372 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12373 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12374 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12375 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12376 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12377 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12378 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}

```

```

12379 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12380 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12381 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12382 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
12383 \define@key{PDF}{Trapped}{%
12384   \edef\Hy@temp{#1}%
12385   \ifx\Hy@temp\@empty
12386   \else
12387     \pdf@addtoks{/#1}{Trapped}%
12388   \fi
12389 }
12390
12391 </pdfmarkbase>
12392 <*pdfmark>
12393 \def\Acrobatmenu#1#2{%
12394   \EdefEscapeName\Hy@temp@menu{#1}%
12395   \Hy@Acrobatmenu{#1}{#2}{%
12396     \pdfmark[{#2}]{%
12397       linktype=menu,%
12398       pdfmark=/ANN,%
12399       AcroHighlight=\@pdfhighlight,%
12400       Border=\@pdfborder,%
12401       BorderStyle=\@pdfborderstyle,%
12402       Color=\@menubordercolor,%
12403       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12404       Subtype=/Link,%
12405       PDFAFlags=4%
12406     }%
12407   }%
12408 }

```

And now for some useful examples:

```

12409 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12410 \def\PDFNextPage@[#1]#2{%
12411   \pdfmark[{#2}]{%
12412     #1,%
12413     Border=\@pdfborder,%
12414     BorderStyle=\@pdfborderstyle,%
12415     Color=.2 .1 .5,%
12416     pdfmark=/ANN,%
12417     Subtype=/Link,%
12418     PDFAFlags=4,%
12419     Page=/Next%
12420   }%
12421 }
12422 \def\PDFPreviousPage{%
12423   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12424 }
12425 \def\PDFPreviousPage@[#1]#2{%
12426   \pdfmark[{#2}]{%
12427     #1,%
12428     Border=\@pdfborder,%
12429     BorderStyle=\@pdfborderstyle,%
12430     Color=.4 .4 .1,%
12431     pdfmark=/ANN,%
12432     Subtype=/Link,%
12433     PDFAFlags=4,%
12434     Page=/Prev%

```

```

12435 }%
12436 }
12437 \def\PDFOpen#1{%
12438   \pdfmark{#1,pdfmark=/DOCVIEW}%
12439 }

```

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

```

12440 \def\hyper@linkurl#1#2{%
12441   \begingroup
12442     \Hy@pstringdef\Hy@pstringURI{#2}%
12443     \hyper@chars
12444     \leavevmode
12445     \pdfmark[{#1}]{%
12446       pdfmark=/ANN,%
12447       linktype=url,%
12448       AcroHighlight=\@pdfhighlight,%
12449       Border=\@pdfborder,%
12450       BorderStyle=\@pdfborderstyle,%
12451       Color=\@urlbordercolor,%
12452       Action={<<%
12453         /Subtype/URI%
12454         /URI(\Hy@pstringURI)%
12455         \ifHy@href@ismap
12456           /IsMap true%
12457         \fi
12458       >>},%
12459       Subtype=/Link,%
12460       PDFAFlags=4%
12461     }%
12462   \endgroup
12463 }
12464 \def\hyper@linkfile#1#2#3{%
12465   \begingroup
12466     \def\Hy@pstringF{#2}%
12467     \Hy@CleanupFile\Hy@pstringF
12468     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12469     \Hy@pstringdef\Hy@pstringD{#3}%
12470     \Hy@MakeRemoteAction
12471     \leavevmode
12472     \pdfmark[{#1}]{%
12473       pdfmark=/ANN,%
12474       Subtype=/Link,%
12475       PDFAFlags=4,%
12476       AcroHighlight=\@pdfhighlight,%
12477       Border=\@pdfborder,%
12478       BorderStyle=\@pdfborderstyle,%
12479       linktype=file,%
12480       Color=\@filebordercolor,%
12481       Action={%
12482         <<%
12483           /S/GoToR%
12484           \Hy@SetNewWindow
12485           /F(\Hy@pstringF)%
12486           /D%
12487           \ifx\#3\%
12488             [\Hy@href@page\@pdfremotestartview]%
12489           \else
12490             (\Hy@pstringD)cvn%

```

```

12491      \fi
12492      \Hy@href@nextactionraw
12493      >>%
12494    }%
12495  }%
12496 \endgroup
12497 }
12498 \def\@hyper@launch run:#1\|#2#3{%
12499   \begingroup
12500   \Hy@pstringdef\Hy@pstringF{#1}%
12501   \Hy@pstringdef\Hy@pstringP{#3}%
12502   \leavevmode
12503   \pdfmark[{#2}]{%
12504     pdfmark=/ANN,%
12505     Subtype=/Link,%
12506     PDFAFlags=4,%
12507     AcroHighlight=\@pdfhighlight,%
12508     Border=\@pdfborder,%
12509     BorderStyle=\@pdfborderstyle,%
12510     linktype=run,%
12511     Color=\@runbordercolor,%
12512     Action={%
12513       <<%
12514         /S/Launch%
12515         \Hy@SetNewWindow
12516         /F(\Hy@pstringF)%
12517         \ifx\|#3\|%
12518         \else
12519           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12520         \fi
12521         \Hy@href@nextactionraw
12522       >>%
12523     }%
12524   }%
12525 \endgroup
12526 }
12527 </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.

```

12528 <*dvips>
12529 \providecommand*\XR@ext}{pdf}
12530 \let\Hy@raisedlink\ltx@empty
12531 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12532 \def\headerps@out#1{\special{! #1}}%
12533 \input{pdfmark.def}%
12534 \ifx\@pdfproducer\relax
12535   \def\@pdfproducer{dvips + Distiller}%
12536 \fi
12537 \providecommand*\@pdfborder{0 0 1}

```

```

12538 \providecommand*\@pdfborderstyle{}
12539 \providecommand*\@pdfview{XYZ}
12540 \providecommand*\@pdfviewparams{ H.V}
12541 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12542 \g@addto@macro\Hy@FirstPageHook{%
12543   \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.

```

12544   /DvipsToPDF{72.27 mul Resolution div} def%
12545   /PDFToDvips{72.27 div Resolution mul} def%
12546   /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.

```

12547   /BorderArrayPatch{%
12548     [exch{%
12549       dup dup type/integertype eq exch type/realtype eq or%
12550       {BPToDvips}if%
12551     }forall]%
12552   }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.

```

12553   /HyperBorder {1 PDFToDvips} def%
12554   /H.V {pdf@hoff pdf@voff null} def%
12555   /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

```

12556   /H.S {%
12557     currentpoint %
12558     HyperBorder add /pdf@lly exch def %
12559     dup DvipsToPDF 72 add /pdf@hoff exch def %
12560     HyperBorder sub /pdf@llx exch def%
12561   } def%

```

The calculation of upper left *y* is done without raising the point in T_EX, 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

```

12562   /H.L {%
12563     2 sub dup%

```



```

12564 /HyperBasePt exch def %
12565 PDFToDvips /HyperBaseDvips exch def %
12566 currentpoint %
12567 HyperBaseDvips sub /pdf@ury exch def%
12568 /pdf@urx exch def%
12569 } def%
12570 /H.A {%
12571 H.L %
12572 % |pdf@voff| = the distance from the top of the page to a point
12573 % |baselineskip| above the current point in PDF coordinates
12574 currentpoint exch pop %
12575 vsize 72 sub exch DvipsToPDF %
12576 HyperBasePt sub % baseline skip
12577 sub /pdf@voff exch def%
12578 } def%
12579 /H.R {%
12580 currentpoint %
12581 HyperBorder sub /pdf@ury exch def %
12582 HyperBorder add /pdf@urx exch def %
12583 % |pdf@voff| = the distance from the top of the page to the current point, in
12584 % PDF coordinates
12585 currentpoint exch pop vsize 72 sub %
12586 exch DvipsToPDF sub /pdf@voff exch def%
12587 } def%
12588 }%
12589 }
12590 \AtBeginShipoutFirst{%
12591 \ifHy@setpagesize
12592 \begingroup
12593 \@ifundefined{stockwidth}{%
12594 \ifdim\paperwidth>\z@
12595 \ifdim\paperheight>\z@
12596 \special{papersize=\the\paperwidth,\the\paperheight}%
12597 \fi
12598 \fi
12599 }{%
12600 \ifdim\stockwidth>\z@
12601 \ifdim\stockheight>\z@
12602 \special{papersize=\the\stockwidth,\the\stockheight}%
12603 \fi
12604 \fi
12605 }%
12606 \endgroup
12607 \fi
12608 \Hy@DisableOption{setpagesize}%
12609 }
12610 \def\setpdfinkmargin#1{%
12611 \begingroup
12612 \setlength{\dimen@}{#1}%
12613 \literalps@out{%
12614 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12615 }%
12616 \endgroup
12617 }
12618 </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.

```

12619 (*vtexpdfmark)
12620 \providecommand*\XR@ext}{pdf}
12621 \let\Hy@raisedlink\ltx@empty
12622 \def\litalps@out#1{\special{pS:#1}}%
12623 \def\headerps@out#1{\immediate\special{pS:#1}}%
12624 \input{pdfmark.def}%
12625 \ifx\@pdfproducer\relax
12626   \ifnum\OpMode=\@ne
12627     \def\@pdfproducer{VTeX}%
12628   \else
12629     \def\@pdfproducer{VTeX + Distiller}%
12630   \fi
12631 \fi
12632 \providecommand*\@pdfborder{0 0 1}
12633 \providecommand*\@pdfborderstyle{}
12634 \providecommand*\@pdfview{XYZ}
12635 \providecommand*\@pdfviewparams{ H.V}

12636 \g@addto@macro\Hy@FirstPageHook{%
12637   \headerps@out{%
12638     /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.

```

12639   /HyperBorder {1} def%
12640   /H.V {pdf@hoff pdf@voff null} def%
12641   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

12642   /H.S {%
12643     currentpoint %
12644     HyperBorder sub%
12645     /pdf@lly exch def %
12646     dup 72 add /pdf@hoff exch def %
12647     HyperBorder sub%
12648     /pdf@llx exch def%
12649   } def%

```

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

```

12650   /H.L {%
12651     2 sub%
12652     /HyperBasePt exch def %
12653     currentpoint %
12654     HyperBasePt add HyperBorder add%
12655     /pdf@ury exch def %
12656     HyperBorder add%
12657     /pdf@urx exch def%
12658   } def%
12659   /H.A {%

```

```

12660      H.L. %
12661      currentpoint exch pop %
12662      vsize 72 sub exch %
12663      HyperBasePt add add%
12664      /pdf@voff exch def%
12665    } def%

pdf@ury = Yc + HyperBorder, pdf@urx = Xc + HyperBorder
12666    /H.R. {%
12667      currentpoint %
12668      HyperBorder add%
12669      /pdf@ury exch def %
12670      HyperBorder add%
12671      /pdf@urx exch def %
12672      currentpoint exch pop vsize 72 sub add%
12673      /pdf@voff exch def%
12674    } def%
12675  }%
12676 }

12677 \def\setpdfinkmargin#1{%
12678   \begingroup
12679   \setlength{\dimen@}{#1}%
12680   \literalps@out{%
12681     /HyperBorder{\strip@pt\dimen@}def%
12682   }%
12683   \endgroup
12684 }

12685 \</vtxpdfmark>

```

47.11 Textures

```

12686 \<*textures>
12687 \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.

```

12688 \begingroup
12689   \obeylines %
12690   \gdef\Hy@ps@CR{\noexpand
12691     }%
12692 \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`.

```
12693 \def\literalps@out#1{%
12694   \special{postscript 0 0 transform}%
12695   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12696 }%
12697 %
```

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.

```
12698 \def\headerps@out#1{%
12699   \special{%
12700     prepostscript TeXdict begin\Hy@ps@CR
12701       #1\Hy@ps@CR
12702     end%
12703   }%
12704 }%
12705 %
```

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.

```
12706 \g@addto@macro\Hy@FirstPageHook{%
12707   \headerps@out{%
12708     /betterpdfmark {%
12709       systemdict begin %
12710         dup /BP eq%
12711         {cleartomark gsave nulldevice []%
12712         {dup /EP eq%
12713         {cleartomark cleartomark grestore}%
12714         {cleartomark}%
12715         ifelse%
12716       }ifelse %
12717     end%
12718   }def\Hy@ps@CR
12719   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12720 }% end of \headerps@out
12721 }% end of \AtBeginShipoutFirst
12722 %
12723 \input{pdfmark.def}%
12724 %
12725 \ifx\@pdfproducer\relax
12726   \def\@pdfproducer{Textures + Distiller}%
12727 \fi
12728 \providecommand*\@pdfborder{0 0 1}
12729 \providecommand*\@pdfborderstyle{}
12730 \providecommand*\@pdfview{XYZ}
12731 \providecommand*\@pdfviewparams{ H.V}
12732 %
```

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 .

```
12733 \Hy@AtBeginDocument{%
```

```

12734 \headerps@out{%
Textures lives in normal points, I think. So conversion from one coordinate system
to another involves doing nothing.

12735 /vsize {\Hy@pageheight} def%
12736 /DvipsToPDF {} def%
12737 /PDFToDvips {} def%
12738 /BPToDvips {} def%
12739 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12740 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12741 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12742 /H.S {%
12743     currentpoint %
12744     HyperBorder add /pdf@lly exch def %
12745     dup DvipsToPDF 72 add /pdf@hoff exch def %
12746     HyperBorder sub /pdf@llx exch def%
12747 } def\Hy@ps@CR
12748 /H.L {%
12749     2 sub %
12750     PDFToDvips /HyperBase exch def %
12751     currentpoint %
12752     HyperBase sub /pdf@ury exch def%
12753     /pdf@urx exch def%
12754 } def\Hy@ps@CR
12755 /H.A {%
12756     H.L %
12757     currentpoint exch pop %
12758     vsize 72 sub exch DvipsToPDF %
12759     HyperBase sub % baseline skip
12760     sub /pdf@voff exch def%
12761 } def\Hy@ps@CR
12762 /H.R {%
12763     currentpoint %
12764     HyperBorder sub /pdf@ury exch def %
12765     HyperBorder add /pdf@urx exch def %
12766     currentpoint exch pop vsize 72 sub %
12767     exch DvipsToPDF sub /pdf@voff exch def%
12768 } def\Hy@ps@CR
12769 }%
12770 }

12771 \def\setpdfinkmargin#1{%
12772 \begingroup
12773 \setlength{\dimen@}{#1}%
12774 \literalps@out{%
12775     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12776 }%
12777 \endgroup
12778 }

12779 \Hy@AtBeginDocument{%
12780 \ifHy@colorlinks
12781 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12782 \fi
12783 }

```

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.

```

12784 \expandafter\let\expandafter\keepPDF@SetupDoc
12785 \csname PDF@SetupDoc\endcsname
12786 \def\PDF@SetupDoc{%
12787   \ifx\@baseurl\@empty
12788   \else
12789     \special{html:<base href="\@baseurl">}%
12790   \fi
12791   \keepPDF@SetupDoc
12792 }
12793 \Hy@WrapperDef\hyper@anchor#1{%
12794   \Hy@SaveLastskip
12795   \Hy@VerboseAnchor{#1}%
12796   \begingroup
12797     \let\protect=\string
12798     \special{html:<a name=%
12799       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12800   \endgroup
12801   \Hy@activeanchortrue
12802   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12803   \special{html:</a>}%
12804   \Hy@activeanchorfalse
12805   \Hy@RestoreLastskip
12806 }
12807 \Hy@WrapperDef\hyper@anchorstart#1{%
12808   \Hy@SaveLastskip
12809   \Hy@VerboseAnchor{#1}%
12810   \begingroup
12811     \hyper@chars
12812     \special{html:<a name=%
12813       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12814   \endgroup
12815   \Hy@activeanchortrue
12816 }
12817 \def\hyper@anchorend{%
12818   \special{html:</a>}%
12819   \Hy@activeanchorfalse
12820   \Hy@RestoreLastskip
12821 }
12822 \def\@urltype{url}
12823 \def\hyper@linkstart#1#2{%
12824   \Hy@VerboseLinkStart{#1}{#2}%
12825   \expandafter\Hy@colorlink\csname @#1color\endcsname
12826   \def\Hy@tempa{#1}%
12827   \ifx\Hy@tempa\@urltype
12828     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12829   \else
12830     \begingroup
12831       \hyper@chars
12832       \special{%
12833         html:<a href=%
12834         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
12835       }%
12836     \endgroup
12837   \fi
12838 }
12839 \def\hyper@linkend{%
12840   \special{html:</a>}%

```

```

12841 \Hy@endcolorlink
12842 }
12843 \def\hyper@linkfile#1#2#3{%
12844 \hyper@linkurl{#1}{%
12845 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12846 }%
12847 }
12848 \def\hyper@linkurl#1#2{%
12849 \leavevmode
12850 \ifHy@raiselinks
12851 \Hy@SaveSpaceFactor
12852 \Hy@SaveSavedSpaceFactor
12853 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12854 \Hy@RestoreSavedSpaceFactor
12855 \@linkdim\dp\@tempboxa
12856 \lower\@linkdim\hbox{%
12857 \hyper@chars
12858 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12859 }%
12860 \Hy@colorlink\@urlcolor
12861 \Hy@RestoreSpaceFactor
12862 #1\Hy@xspace@end
12863 \Hy@SaveSpaceFactor
12864 \@linkdim\ht\@tempboxa
12865 \advance\@linkdim by -6.5\p@
12866 \raise\@linkdim\hbox{\special{html:</a>}}%
12867 \Hy@endcolorlink
12868 \Hy@RestoreSpaceFactor
12869 \else
12870 \begingroup
12871 \hyper@chars
12872 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12873 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12874 \special{html:</a>}}%
12875 \Hy@endcolorlink
12876 \endgroup
12877 \fi
12878 }

```

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

```

12879 \def\hyper@link#1#2#3{%
12880 \Hy@VerboseLinkStart{#1}{#2}%
12881 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
12882 }
12883 \def\hyper@image#1#2{%
12884 \begingroup
12885 \hyper@chars
12886 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
12887 \endgroup
12888 }
12889 </textures>

```

47.12 dvipsone

```

12890 % \subsection{dvipsone driver}
12891 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12892 % |\special| commands.
12893 (*dvipsone)

```

```

12894 \providecommand*\XR@ext\{pdf}
12895 \let\Hy@raisedlink\ltx@empty
12896 \providecommand*\@pdfborder{0 0 1}
12897 \providecommand*\@pdfborderstyle{}
12898 \def\literalps@out#1{\special{ps:#1}}%
12899 \def\headerps@out#1{\special{headertext=#1}}%
12900 \input{pdfmark.def}%
12901 \HyInfo@AddonUnsupportedtrue
12902 \def\PDF@FinishDoc{%
12903   \Hy@UseMaketitleInfos
12904   \HyInfo@TrappedUnsupported
12905   \special{PDF: Keywords \@pdfkeywords}%
12906   \special{PDF: Title \@pdftitle}%
12907   \special{PDF: Creator \@pdfcreator}%
12908   \ifx\@pdfcreationdate\@empty
12909   \else
12910     \special{PDF: CreationDate \@pdfcreationdate}%
12911   \fi
12912   \ifx\@pdfmoddate\@empty
12913   \else
12914     \special{PDF: ModDate \@pdfmoddate}%
12915   \fi
12916   \special{PDF: Author \@pdfauthor}%
12917   \ifx\@pdfproducer\relax
12918   \else
12919     \special{PDF: Producer \@pdfproducer}%
12920   \fi
12921   \special{PDF: Subject \@pdfsubject}%
12922   \Hy@DisableOption{pdfauthor}%
12923   \Hy@DisableOption{pdftitle}%
12924   \Hy@DisableOption{pdfsubject}%
12925   \Hy@DisableOption{pdfcreator}%
12926   \Hy@DisableOption{addtopdfcreator}%
12927   \Hy@DisableOption{pdfcreationdate}%
12928   \Hy@DisableOption{pdfcreationdate}%
12929   \Hy@DisableOption{pdfmoddate}%
12930   \Hy@DisableOption{pdfproducer}%
12931   \Hy@DisableOption{pdfkeywords}%
12932   \Hy@DisableOption{pdftrapped}%
12933   \Hy@DisableOption{pdfinfo}%
12934 }
12935 \def\PDF@SetupDoc{%
12936   \def\Hy@temp{}%
12937   \ifx\@pdfstartpage\@empty
12938   \else
12939     \ifx\@pdfstartview\@empty
12940     \else
12941       \edef\Hy@temp{%
12942         ,Page=\@pdfstartpage
12943         ,View=\@pdfstartview
12944       }%
12945     \fi
12946   \fi
12947   \edef\Hy@temp{%
12948     \noexpand\pdfmark{%
12949       pdfmark=/DOCVIEW,%
12950       PageMode=/\@pdfpagemode

```



```

12951     \Hy@temp
12952   }%
12953 }%
12954 \Hy@temp
12955 \ifx\@pdfpagescrop\@empty
12956 \else
12957   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12958 \fi
12959 \edef\Hy@temp{%
12960   \ifHy@pdftoolbar\else /HideToolbar true\fi
12961   \ifHy@pdfmenubar\else /HideMenubar true\fi
12962   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12963   \ifHy@pdfwindow /FitWindow true\fi
12964   \ifHy@pdfcenterwindow /CenterWindow true\fi
12965   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12966   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12967   \Hy@UseNameKey{Direction}\@pdfdirection
12968   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12969   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12970   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12971   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12972   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12973   \Hy@UseNameKey{Duplex}\@pdfduplex
12974   \ifx\@pdfpicktraybypdfsize\@empty
12975     \else
12976     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12977   \fi
12978   \ifx\@pdfprintpagerange\@empty
12979     \else
12980     /PrintPageRange[\@pdfprintpagerange]%
12981   \fi
12982   \ifx\@pdfnumcopies\@empty
12983     \else
12984     /NumCopies \@pdfnumcopies
12985   \fi
12986 }%
12987 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12988 \pdfmark{%
12989   pdfmark=/PUT,%
12990   Raw={%
12991     \string{Catalog\string}<<%
12992     \ifx\Hy@temp\@empty
12993       \else
12994       /ViewerPreferences<<\Hy@temp>>%
12995     \fi
12996     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12997     \ifx\@pdflang\relax
12998       \else
12999       /Lang(\@pdflang)%
13000     \fi
13001     \ifx\@baseurl\@empty
13002       \else
13003       /URI<</Base(\Hy@pstringB)>>%
13004     \fi
13005     >>%
13006   }%
13007 }%

```

```

13008 }
13009 \providecommand*\@pdfview{XYZ}
13010 \providecommand*\@pdfviewparams{ %
13011   gsave revscl currentpoint grestore %
13012   72 add exch pop null exch null%
13013 }
13014 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```

13015 \g@addto@macro\Hy@FirstPageHook{%
13016   \headerps@out{%

```

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

```

13017   /DvipsToPDF { 65781 div } def%
13018   /PDFToDvips { 65781 mul } def%
13019   /BPToDvips{65781 mul}def%
13020   /HyperBorder { 1 PDFToDvips } def%
13021   /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.

```

13022   /BorderArrayPatch{%
13023     [exch{%
13024       dup dup type/integertype eq exch type/realtype eq or%
13025       {BPToDvips}if%
13026     }forall]%
13027   }def%
13028   /H.S {%
13029     currentpoint %
13030     HyperBorder add /pdf@lly exch def %
13031     dup DvipsToPDF 72 add /pdf@hoff exch def %
13032     HyperBorder sub /pdf@llx exch def%
13033   } def%
13034   /H.L {%
13035     2 sub %
13036     PDFToDvips /HyperBase exch def %
13037     currentpoint %
13038     HyperBase sub /pdf@ury exch def%
13039     /pdf@urx exch def%
13040   } def%
13041   /H.A {%
13042     H.L %
13043     currentpoint exch pop %
13044     HyperBase sub % baseline skip
13045     DvipsToPDF /pdf@voff exch def%
13046   } def%
13047   /H.R {%
13048     currentpoint %
13049     HyperBorder sub /pdf@ury exch def %
13050     HyperBorder add /pdf@urx exch def %
13051     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13052   } def%
13053 }%
13054 }

```

```

13055 \def\setpdfinkmargin#1{%
13056   \begingroup
13057     \setlength{\dimen@}{#1}%
13058     \literalps@out{%
13059       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13060     }%
13061   \endgroup
13062 }
13063 </dvipsone>

```

47.13 TeX4ht

```

13064 (*tex4ht)
13065 \providecommand*\XR@ext>{html}
13066 \let\Hy@raisedlink\ltx@empty
13067 \@ifpackageloaded{tex4ht}{%
13068   \Hy@InfoNoLine{tex4ht is already loaded}%
13069 }{%
13070   \RequirePackage[hTeX4ht]{tex4ht}%
13071 }
13072 \hyperlinkfileprefix{}
13073 \let\PDF@FinishDoc\ltx@empty
13074 \def\PDF@SetupDoc{%
13075   \ifx\@baseurl\@empty
13076   \else
13077     \special{t4ht=<base href="\@baseurl">}%
13078   \fi
13079 }
13080 \Hy@WrapperDef\hyper@anchor#1{%
13081   \Hy@SaveLastskip
13082   \Hy@VerboseAnchor{#1}%
13083   \begingroup
13084     \let\protect=\string
13085     \special{t4ht=<a name=%
13086       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13087   \endgroup
13088   \Hy@activeanchortrue
13089   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13090   \special{t4ht=</a>}%
13091   \Hy@activeanchorfalse
13092   \Hy@RestoreLastskip
13093 }
13094 \Hy@WrapperDef\hyper@anchorstart#1{%
13095   \Hy@SaveLastskip
13096   \Hy@VerboseAnchor{#1}%
13097   \begingroup
13098     \hyper@chars\special{t4ht=<a name=%
13099       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13100   \endgroup
13101   \Hy@activeanchortrue
13102 }
13103 \def\hyper@anchorend{%
13104   \special{t4ht=</a>}%
13105   \Hy@activeanchorfalse
13106   \Hy@RestoreLastskip
13107 }
13108 \def\@urltype{url}
13109 \def\hyper@linkstart#1#2{%

```

```

13110 \Hy@VerboseLinkStart{#1}{#2}%
13111 \expandafter\Hy@colorlink\csname @#1color\endcsname
13112 \def\Hy@tempa{#1}%
13113 \ifx\Hy@tempa\@urltype
13114 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13115 \else
13116 \begingroup
13117 \hyper@chars
13118 \special{t4ht=<a href=%
13119 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
13120 \endgroup
13121 \fi
13122 }
13123 \def\hyper@linkend{%
13124 \special{t4ht=</a>}%
13125 \Hy@endcolorlink
13126 }
13127 \def\hyper@linkfile#1#2#3{%
13128 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13129 }
13130 \def\hyper@linkurl#1#2{%
13131 \leavevmode
13132 \ifHy@raiselinks
13133 \Hy@SaveSpaceFactor
13134 \Hy@SaveSavedSpaceFactor
13135 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13136 \Hy@RestoreSavedSpaceFactor
13137 \@linkdim\dp\@tempboxa
13138 \lower\@linkdim\hbox{%
13139 \begingroup
13140 \hyper@chars
13141 \special{%
13142 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13143 }%
13144 \endgroup
13145 }%
13146 \Hy@colorlink\@urlcolor
13147 \Hy@RestoreSpaceFactor
13148 #1\Hy@xspace@end
13149 \Hy@SaveSpaceFactor
13150 \Hy@endcolorlink
13151 \@linkdim\ht\@tempboxa
13152 \advance\@linkdim by -6.5\p@
13153 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13154 \Hy@RestoreSpaceFactor
13155 \else
13156 \begingroup
13157 \hyper@chars
13158 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13159 \Hy@colorlink\@urlcolor
13160 #1\Hy@xspace@end
13161 \Hy@endcolorlink
13162 \special{t4ht=</a>}%
13163 \endgroup
13164 \fi
13165 }

```

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

```

13166 \def\hyper@link#1#2#3{%
13167   \Hy@VerboseLinkStart{#1}{#2}%
13168   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
13169 }
13170 \def\hyper@image#1#2{%
13171   \begingroup
13172     \hyper@chars
13173     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13174   \endgroup
13175 }
13176 \let\autoref\ref
13177 \ifx \rEFLiNK \UnDef
13178   \def\rEFLiNK #1#2{#2}%
13179 \fi
13180 \let\backref\ltx@gobble

Fix for tex4ht.
13181 \AtBeginDocument{%
13182   \expandafter
13183   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13184   \expandafter\def\csname Make:Label\endcsname#1#2{%
13185     \ifhmode
13186       \Hy@SaveSpaceFactor
13187     \else
13188       \global\Hy@SavedSpaceFactor=1000 %
13189     \fi
13190     \Hy@OrgMakeLabel{#1}{%
13191       \Hy@RestoreSpaceFactor
13192       #2\Hy@xspace@end%
13193       \Hy@SaveSpaceFactor
13194     }%
13195     \Hy@RestoreSpaceFactor
13196   }%
13197 }
13198 </tex4ht>
13199 <*tex4htcfg>
13200 \IfFileExists{\jobname.cfg}{\endinput}{}
13201 \Preamble{html}
13202   \begin{document}%
13203 \EndPreamble
13204 \def\TeX{TeX}
13205 \def\OMEGA{\Omega}
13206 \def\LaTeX{LaTeX}
13207 \def\LaTeXe{\LaTeX2e}
13208 \def\eTeX{e-TeX}
13209 \def\MF{Metafont}
13210 \def\MP{MetaPost}
13211 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13212 <*pdfmark>
13213 \long\def\@Form[#1]{%
13214   \g@addto@macro\Hy@FirstPageHook{%
13215     \headerps@out{%
13216       [%

```

13217 /__objdef{pdfDocEncoding}%
13218 /type/dict%
13219 /OBJ pdfmark%
13220 [%
13221 {pdfDocEncoding}%
13222 <<%
13223 /Type/Encoding%
13224 /Differences[%
13225 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13226 /tilde %
13227 39/quotesingle %
13228 96/grave %
13229 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13230 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13231 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13232 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13233 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13234 164/currency %
13235 166/brokenbar %
13236 168/dieresis/copyright/ordfeminine %
13237 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13238 /twosuperior/threesuperior/acute/mu %
13239 183/periodcentered/cedilla/onesuperior/ordmasculine %
13240 188/onequarter/onehalf/threequarters %
13241 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13242 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13243 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13244 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13245 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13246 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13247 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13248 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13249 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13250 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13251]%
13252 >>%
13253 /PUT pdfmark%
13254 [%
13255 /__objdef{ZaDb}%
13256 /type/dict%
13257 /OBJ pdfmark%
13258 [%
13259 {ZaDb}%
13260 <<%
13261 /Type/Font%
13262 /Subtype/Type1%
13263 /Name/ZaDb%
13264 /BaseFont/ZapfDingbats%
13265 >>%
13266 /PUT pdfmark%
13267 [%
13268 /__objdef{Helv}%
13269 /type/dict%
13270 /OBJ pdfmark%
13271 [%
13272 {Helv}%
13273 <<%

```

13274 /Type/Font%
13275 /Subtype/Type1%
13276 /Name/Helv%
13277 /BaseFont/Helvetica%
13278 /Encoding{pdfDocEncoding}%
13279 >>%
13280 /PUT pdfmark%
13281 [%
13282 /__objdef{aform}%
13283 /type/dict%
13284 /OBJ pdfmark%
13285 [%
13286 /__objdef{afields}%
13287 /type/array%
13288 /OBJ pdfmark%
13289 [%
13290 /__objdef{corder}%
13291 /type/array%
13292 /OBJ pdfmark%
13293 {%
13294 [%
13295 /BBox[0 0 100 100]%
13296 /__objdef{Check}%
13297 /BP pdfmark %
13298 1 0 0 setrgbcolor%
13299 /ZapfDingbats 80 selectfont %
13300 20 20 moveto%
13301 (4)show%
13302 [/EP pdfmark%
13303 [%
13304 /BBox[0 0 100 100]%
13305 /__objdef{Cross}%
13306 /BP pdfmark %
13307 1 0 0 setrgbcolor%
13308 /ZapfDingbats 80 selectfont %
13309 20 20 moveto%
13310 (8)show%
13311 [/EP pdfmark%
13312 [%
13313 /BBox[0 0 250 100]%
13314 /__objdef{Submit}%
13315 /BP pdfmark %
13316 0.6 setgray %
13317 0 0 250 100 rectfill %
13318 1 setgray %
13319 2 2 moveto %
13320 2 98 lineto %
13321 248 98 lineto %
13322 246 96 lineto %
13323 4 96 lineto %
13324 4 4 lineto %
13325 fill %
13326 0.34 setgray %
13327 248 98 moveto %
13328 248 2 lineto %
13329 2 2 lineto %
13330 4 4 lineto %

```

```

13331 246 4 lineto %
13332 246 96 lineto %
13333 fill%
13334 /Helvetica 76 selectfont %
13335 0 setgray %
13336 8 22.5 moveto%
13337 (Submit)show%
13338 [/EP pdfmark%
13339 [%
13340 /BBox[0 0 250 100]%
13341 /_objdef{SubmitP}%
13342 /BP pdfmark %
13343 0.6 setgray %
13344 0 0 250 100 rectfill %
13345 0.34 setgray %
13346 2 2 moveto %
13347 2 98 lineto %
13348 248 98 lineto %
13349 246 96 lineto %
13350 4 96 lineto %
13351 4 4 lineto %
13352 fill %
13353 1 setgray %
13354 248 98 moveto %
13355 248 2 lineto %
13356 2 2 lineto %
13357 4 4 lineto %
13358 246 4 lineto %
13359 246 96 lineto %
13360 fill%
13361 /Helvetica 76 selectfont %
13362 0 setgray %
13363 10 20.5 moveto%
13364 (Submit)show%
13365 [/EP pdfmark%
13366 } ?pdfmark%
13367 [%
13368 {aform}%
13369 <<%
13370 /Fields{afields}%
13371 /DR<<%
13372 /Font<<%
13373 /ZaDb{ZaDb}%
13374 /Helv{Helv}%
13375 >>%
13376 >>%
13377 /DA(/Helv 10 Tf 0 g)%
13378 /CO{corder}%
13379 \ifHy@pdfa
13380 \else
13381 \ifHyField@NeedAppearances
13382 /NeedAppearances true%
13383 \fi
13384 \fi
13385 >>%
13386 /PUT pdfmark%
13387 [%

```



```

13388 {Catalog}%
13389 <<%
13390 /AcroForm{aform}%
13391 >>%
13392 /PUT pdfmark%
13393 }}%
13394 \kvsetkeys{Form}{#1}%
13395 }
13396 \let\@endForm\ltx@empty
13397 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13398 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13399 }

13400 \newcount\HyField@AnnotCount
13401 \HyField@AnnotCount=\z@
13402 \def\HyField@AdvanceAnnotCount{%
13403 \global\advance\HyField@AnnotCount\@ne
13404 }
13405 \def\HyField@TheAnnotCount{%
13406 \the\HyField@AnnotCount
13407 }

13408 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13409 \def\HyField@AddToFields#1{%
13410 \pdfmark{%
13411 pdfmark=/APPEND,%
13412 Raw={%
13413 \string{afields\string}%
13414 \string{#1\HyField@TheAnnotCount\string}%
13415 }%
13416 }%
13417 \ifx\Fld@calculate@code\ltx@empty
13418 \else
13419 \pdfmark{%
13420 pdfmark=/APPEND,%
13421 Raw={%
13422 \string{corder\string}%
13423 \string{#1\HyField@TheAnnotCount\string}%
13424 }%
13425 }%
13426 \fi
13427 }

13428 \def\@TextField[#1]#2{% parameters, label
13429 \def\Fld@name{#2}%
13430 \let\Fld@default\ltx@empty
13431 \let\Fld@value\@empty
13432 \def\Fld@width{\DefaultWidthofText}%
13433 \def\Fld@height{%
13434 \ifFld@multiline
13435 \DefaultHeightofTextMultiline
13436 \else
13437 \DefaultHeightofText
13438 \fi
13439 }%
13440 \begingroup
13441 \expandafter\HyField@SetKeys\expandafter{%
13442 \DefaultOptionsofText,#1%
13443 }%

```

```

13444 \HyField@FlagsText
13445 \ifFld@hidden\def\Fld@width{1sp}\fi
13446 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13447 \HyField@AdvanceAnnotCount
13448 \LayoutTextField{#2}{%
13449 \leavevmode
13450 \Hy@escapeform\PDFForm@Text
13451 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13452 pdfmark=/ANN,%
13453 objdef=text\HyField@TheAnnotCount,%
13454 Raw={\PDFForm@Text}%
13455 }%
13456 }%
13457 \HyField@AddToFields{text}%
13458 \endgroup
13459 }
13460 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13461 \def\Fld@name{#2}%
13462 \let\Fld@default\relax
13463 \let\Fld@value\relax
13464 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13465 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13466 \begingroup
13467 \Fld@menulength=0 %
13468 \@tempdima\z@
13469 \@for\@curropt:=#3\do{%
13470 \expandafter\Fld@checkequals\@curropt==\%
13471 \Hy@StepCount\Fld@menulength
13472 \settowidth{\@tempdimb}{\@currDisplay}%
13473 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13474 }%
13475 \advance\@tempdima by 15\p@
13476 \begingroup
13477 \HyField@SetKeys{#1}%
13478 \edef\x{\endgroup
13479 \noexpand\expandafter
13480 \noexpand\HyField@SetKeys
13481 \noexpand\expandafter{%
13482 \expandafter\noexpand\csname DefaultOptionsof%
13483 \ifFld@radio
13484 Radio%
13485 \else
13486 \ifFld@combo
13487 \ifFld@popdown
13488 PopdownBox%
13489 \else
13490 ComboBox%
13491 \fi
13492 \else
13493 ListBox%
13494 \fi
13495 \fi
13496 \endcsname
13497 }%
13498 }\x
13499 \HyField@SetKeys{#1}%
13500 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13501 \ifx\Fld@value\relax
13502 \let\Fld@value\Fld@default
13503 \fi
13504 \LayoutChoiceField{#2}{%
13505 \ifFld@radio
13506 \HyField@FlagsRadioButton
13507 \@@Radio{#3}%
13508 \else
13509 \begingroup
13510 \HyField@FlagsChoice
13511 \ifdim\Fld@width<\@tempdima
13512 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13513 \edef\Fld@width{\the\@tempdima}%
13514 \fi
13515 \ifFld@combo
13516 \else
13517 \@tempdima=\the\Fld@menulength\Fld@charsize
13518 \advance\@tempdima by \Fld@borderwidth bp %
13519 \advance\@tempdima by \Fld@borderwidth bp %
13520 \edef\Fld@height{\the\@tempdima}%
13521 \fi
13522 \@@ListBox{#3}%
13523 \endgroup
13524 \fi
13525 }%
13526 \endgroup
13527 }
13528 \def\@@Radio#1{%
13529 \Fld@listcount=0 %
13530 \EdefEscapeName\Fld@default{\Fld@default}%
13531 \@for\@curropt:=#1\do{%
13532 \expandafter\Fld@checkequals\@curropt==\%
13533 \EdefEscapeName\@currValue{\@currValue}%
13534 \Hy@StepCount\Fld@listcount
13535 \@currDisplay\space
13536 \Hy@escapeform\PDFForm@Radio
13537 \ifnum\Fld@listcount=1 %
13538 \HyField@AdvanceAnnotCount
13539 \fi
13540 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13541 pdfmark=/ANN,%
13542 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13543 Raw={%
13544 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13545 }%
13546 } % deliberate space between radio buttons
13547 \ifnum\Fld@listcount=1 %
13548 \HyField@AddToFields{radio}%
13549 \fi
13550 }%
13551 }
13552 \newcount\Fld@listcount
13553 \def\@@ListBox#1{%
13554 \HyField@PDFChoices{#1}%
13555 \Hy@escapeform\PDFForm@List
13556 \HyField@AdvanceAnnotCount
13557 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%

```

```

13558 pdfmark=/ANN,%
13559 objdef=list\HyField@TheAnnotCount,%
13560 Raw={\PDFForm@List}%
13561 }%
13562 \HyField@AddToFields{list}%
13563 }
13564 \def\@PushButton[#1]#2{% parameters, label
13565 \def\Fld@name{#2}%
13566 \begingroup
13567 \expandafter\HyField@SetKeys\expandafter{%
13568 \DefaultOptionsofPushButton,#1%
13569 }%
13570 \ifHy@pdfa
13571 \Hy@Error{%
13572 PDF/A: Push button with JavaScript is prohibited%
13573 } \@ehc
13574 \LayoutPushButtonField{%
13575 \leavevmode
13576 \MakeButtonField{#2}%
13577 }%
13578 \else
13579 \HyField@FlagsPushButton
13580 \ifFld@hidden\def\Fld@width{1sp}\fi
13581 \HyField@AdvanceAnnotCount
13582 \LayoutPushButtonField{%
13583 \leavevmode
13584 \Hy@escapeform\PDFForm@Push
13585 \pdfmark[\MakeButtonField{#2}]{%
13586 pdfmark=/ANN,%
13587 objdef=push\HyField@TheAnnotCount,%
13588 Raw={\PDFForm@Push}%
13589 }%
13590 }%
13591 \HyField@AddToFields{push}%
13592 \fi
13593 \endgroup
13594 }
13595 \def\@Submit[#1]#2{%
13596 \def\Fld@width{\DefaultWidthofSubmit}%
13597 \def\Fld@height{\DefaultHeightofSubmit}%
13598 \begingroup
13599 \expandafter\HyField@SetKeys\expandafter{%
13600 \DefaultOptionsofSubmit,#1%
13601 }%
13602 \HyField@FlagsPushButton
13603 \HyField@FlagsSubmit
13604 \ifFld@hidden\def\Fld@width{1sp}\fi
13605 \Hy@escapeform\PDFForm@Submit
13606 \HyField@AdvanceAnnotCount
13607 \pdfmark[\MakeButtonField{#2}]{%
13608 pdfmark=/ANN,%
13609 objdef=submit\HyField@TheAnnotCount,%
13610 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13611 }%
13612 \HyField@AddToFields{submit}%
13613 \endgroup
13614 }

```

```

13615 \def\@Reset[#1]#2{%
13616   \def\Fld@width{\DefaultWidthofReset}%
13617   \def\Fld@height{\DefaultHeightofReset}%
13618   \begingroup
13619     \expandafter\HyField@SetKeys\expandafter{%
13620       \DefaultOptionsofReset,#1%
13621     }%
13622     \leavevmode
13623     \ifHy@pdfa
13624       \Hy@Error{%
13625         PDF/A: Reset action is prohibited%
13626       }\@ehc
13627       \MakeButtonField{#2}%
13628     \else
13629       \HyField@FlagsPushButton
13630       \ifFld@hidden\def\Fld@width{1sp}\fi
13631       \Hy@escapeform\PDFForm@Reset
13632       \HyField@AdvanceAnnotCount
13633       \pdfmark[\MakeButtonField{#2}]{%
13634         pdfmark=/ANN,%
13635         objdef=reset\HyField@TheAnnotCount,%
13636         Raw={\PDFForm@Reset}%
13637       }%
13638       \HyField@AddToFields{reset}%
13639     \fi
13640   \endgroup
13641 }%
13642 \def\@CheckBox[#1]#2{% parameters, label
13643   \def\Fld@name{#2}%
13644   \def\Fld@default{0}%
13645   \begingroup
13646     \def\Fld@width{\DefaultWidthofCheckBox}%
13647     \def\Fld@height{\DefaultHeightofCheckBox}%
13648     \expandafter\HyField@SetKeys\expandafter{%
13649       \DefaultOptionsofCheckBox,#1%
13650     }%
13651     \HyField@FlagsCheckBox
13652     \ifFld@hidden\def\Fld@width{1sp}\fi
13653     \HyField@AdvanceAnnotCount
13654     \LayoutCheckField{#2}{%
13655       \leavevmode
13656       \Hy@escapeform\PDFForm@Check
13657       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13658         pdfmark=/ANN,%
13659         objdef=check\HyField@TheAnnotCount,%
13660         Raw={\PDFForm@Check}%
13661       }%
13662     }%
13663     \HyField@AddToFields{check}%
13664   \endgroup
13665 }
13666 \pdfmark

```

48.2 HyperTeX

```

13667 \hypertex
13668 \def\@Form[#1]{%
13669   \Hy@Message{Sorry, HyperTeX does not support FORMs}%

```

```

13670 }
13671 \let\@endForm\ltx@empty
13672 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13673   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13674 }
13675 \def\@TextField[#1]#2{% parameters, label
13676   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13677 }
13678 \def\@CheckBox[#1]#2{% parameters, label
13679   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13680 }
13681 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13682   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13683 }
13684 \def\@PushButton[#1]#2{% parameters, label
13685   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13686 }
13687 \def\@Reset[#1]#2{%
13688   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13689 }
13690 \def\@Submit[#1]#2{%
13691   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13692 }
13693 \</hypertex>

```

48.3 TeX4ht

```

13694 \*tex4ht
13695 \def\@Form[#1]{%
13696   \kvsetkeys{Form}{#1}%
13697   \HCode{<form action="\Form@action" method="\Form@method">}%
13698 }
13699 \def\@endForm{\HCode{</form>}}
13700 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13701   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13702 }
13703 \def\@TextField[#1]#2{% parameters, label
13704   \let\Hy@reserved@a\@empty
13705   \def\Fld@name{#2}%
13706   \let\Fld@default\ltx@empty
13707   \bgroup
13708     \Field@toks={ }%
13709     \kvsetkeys{Field}{#1}%
13710     \HCode{<label for="\Fld@name">#2</label>}%
13711     \ifFld@password
13712       \@@PasswordField
13713     \else
13714       \@@TextField
13715     \fi
13716   \egroup
13717 }
13718 \def\@@PasswordField{%
13719   \HCode{%
13720     <input type="password" %
13721       id="\Fld@name" %
13722       name="\Fld@name" %
13723       \ifFld@hidden type="hidden" \fi
13724       value="\Fld@default" %

```

```

13725     \the\Field@toks
13726     >%
13727 }%
13728 }
13729 \def\@@TextField{%
13730   \ifFld@multiline
13731     \HCode{<textarea %
13732       \ifFld@readonly readonly \fi
13733       id="\Fld@name" %
13734       name="\Fld@name" %
13735       \ifFld@hidden type="hidden" \fi
13736       \the\Field@toks>%
13737   }%
13738   \Fld@default
13739   \HCode{</textarea>}%
13740 \else
13741   \HCode{<input type="text" %
13742     \ifFld@readonly readonly \fi
13743     id="\Fld@name" %
13744     name="\Fld@name" %
13745     \ifFld@hidden type="hidden" \fi
13746     value="\Fld@default" %
13747     \the\Field@toks>%
13748   }%
13749 \fi
13750 }
13751 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13752   \def\Fld@name{#2}%
13753   \let\Fld@default\ltx@empty
13754   \let\Hy@reserved@a\relax
13755   \begingroup
13756     \expandafter\Fld@findlength#3\\%
13757     \Field@toks={ }%
13758     \kvsetkeys{Field}{#1}%
13759     #2%
13760     \ifFld@radio
13761       \expandafter\@@Radio#3\\%
13762     \else
13763       \expandafter\@@Menu#3\\%
13764     \fi
13765   \endgroup
13766 }
13767 \def\Fld@findlength#1\\{%
13768   \Fld@menulength=0 %
13769   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13770 }
13771 \def\@@Menu#1\\{%
13772   \HCode{<select size="\the\Fld@menulength" %
13773     name="\Fld@name" %
13774     \the\Field@toks>%
13775   }%
13776   \@for\@curropt:=#1\do{%
13777     \expandafter\Fld@checkequals\@curropt==\\%
13778     \HCode{<option %
13779       \ifx\@curropt\Fld@default selected \fi
13780       value="\@currValue">\@currDisplay</option>%
13781     }%

```

```

13782 }%
13783 \HCode{</select>}%
13784 }
13785 \def\@@Radio#1\{\{%
13786 \@for\@curropt:=#1\do{%
13787 \expandafter\Fld@checkequals\@curropt==\{%
13788 \HCode{<input type="radio" %
13789 \ifx\@curropt\Fld@default checked \fi
13790 name="\Fld@name" %
13791 value="\@currValue" %
13792 \the\Field@toks>%
13793 }%
13794 \@currDisplay
13795 }%
13796 }
13797 \def\@PushButton[#1]#2{% parameters, label
13798 \def\Fld@name{#2}%
13799 \bgroup
13800 \Field@toks={ }%
13801 \kvsetkeys{Field}{#1}%
13802 \HCode{<input type="button" %
13803 name="\Fld@name" %
13804 value="#2" %
13805 \the\Field@toks>%
13806 }%
13807 \HCode{</button>}%
13808 \egroup
13809 }
13810 \def\@Submit[#1]#2{%
13811 \HCode{<button type="submit">#2</button>}%
13812 }
13813 \def\@Reset[#1]#2{%
13814 \HCode{<button type="reset">#2</button>}%
13815 }
13816 \def\@CheckBox[#1]#2{% parameters, label
13817 \let\Hy@reserved@a\@empty
13818 \def\Fld@name{#2}%
13819 \def\Fld@default{0}%
13820 \bgroup
13821 \Field@toks={ }%
13822 \kvsetkeys{Field}{#1}%
13823 \HCode{<input type="checkbox" %
13824 \ifFld@checked checked \fi
13825 \ifFld@disabled disabled \fi
13826 \ifFld@readonly readonly \fi
13827 name="\Fld@name" %
13828 \ifFld@hidden type="hidden" \fi
13829 value="\Fld@default" %
13830 \the\Field@toks>%
13831 #2%
13832 }%
13833 \egroup
13834 }
13835 </tex4ht>

```

48.4 pdfTeX

```

13836 <*pdftex>

```



```

13837 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13838 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
13839 }
13840 \def\MakeFieldObject#1#2{\sbox0{#1}%
13841 \immediate\pdfxform0 %
13842 \expandafter\edef\csname #2Object\endcsname{%
13843 \the\pdfastxform\space 0 R%
13844 }%
13845 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13846 }%
13847 \let\HyField@afields\ltx@empty
13848 \let\HyField@cofields\ltx@empty
13849 \begingroup\expandafter\expandafter\expandafter\endgroup
13850 \expandafter\ifx\csname pdfastlink\endcsname\relax
13851 \let\HyField@AddToFields\relax
13852 \PackageInfo{hyperref}{%
13853 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13854 \MessageBreak
13855 Adobe Reader/Acrobat accepts an empty /Field array,%
13856 \MessageBreak
13857 but other PDF viewers might complain%
13858 }%
13859 \else
13860 \let\HyField@AuxAddToFields\ltx@gobble
13861 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13862 \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.

```

13863 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13864 \begingroup
13865 \Hy@safe@activestrue
13866 \let\ltx@secondoftwo\relax
13867 \ifx\HyField@cofields\ltx@empty
13868 \xdef\HyField@cofields{%
13869 \ltx@secondoftwo{#1}{ #2 0 R}%
13870 }%
13871 \else
13872 \let\ltx@secondoftwo\relax
13873 \def\HyField@AddCoField###1##2###3{%
13874 \ifx##1\ltx@empty
13875 \ltx@secondoftwo{#1}{ #2 0 R}%
13876 \expandafter\ltx@gobble
13877 \else
13878 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13879 \ltx@secondoftwo{#1}{ #2 0 R}%
13880 \ltx@secondoftwo{##2}{##3}%
13881 \expandafter\expandafter\expandafter\ltx@gobble
13882 \else
13883 \ltx@secondoftwo{##2}{##3}%
13884 \fi
13885 \fi
13886 \HyField@AddCoField
13887 }%
13888 \xdef\HyField@cofields{%
13889 \expandafter\HyField@AddCoField
13890 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13891 }%

```

```

13892 \fi
13893 \endgroup
13894 }%
13895 \Hy@AtBeginDocument{%
13896 \if@filesw
13897 \immediate\write\@mainaux{%
13898 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13899 }%
13900 \immediate\write\@mainaux{%
13901 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13902 }%
13903 \fi
13904 \let\HyField@AfterAuxOpen\@firstofone
13905 \def\HyField@AuxAddToFields#1{%
13906 \xdef\HyField@afields{%
13907 \ifx\HyField@afields\@empty
13908 \else
13909 \HyField@afields
13910 \space
13911 \fi
13912 #1 0 R%
13913 }%
13914 }%
13915 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13916 }%
13917 \def\HyField@AddToFields{%
13918 \expandafter\HyField@@AddToFields\expandafter{%
13919 \the\pdfastlink
13920 }%
13921 \ifx\Fld@calculate@code\ltx@empty
13922 \else
13923 \begingroup
13924 \Hy@safe@activetrue
13925 \edef\Hy@temp{%
13926 \endgroup
13927 \if@filesw
13928 \write\@mainaux{%
13929 \string\HyField@AuxAddToCoFields{%
13930 \Fld@calculate@sortkey
13931 }{%
13932 \the\pdfastlink
13933 }%
13934 }%
13935 \fi
13936 }%
13937 \Hy@temp
13938 \fi
13939 }%
13940 \def\HyField@@AddToFields#1{%
13941 \HyField@AfterAuxOpen{%
13942 \if@filesw
13943 \write\@mainaux{%
13944 \string\HyField@AuxAddToFields{#1}%
13945 }%
13946 \fi
13947 }%
13948 }%

```

```

13949 \fi
13950 \def\@Form[#1]{%
13951   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13952   \kvsetkeys{Form}{#1}%
13953   \pdf@ifdraftmode{}{%
13954     \Hy@FormObjects
13955     \ifnum\pdfTeXversion>13 %
13956       \pdfrefobj\OBJ@pdfdocencoding
13957       \pdfrefobj\OBJ@ZaDb
13958       \pdfrefobj\OBJ@Helv
13959     \fi
13960     \AtVeryEndDocument{%
13961       \immediate\pdfobj{%
13962         <<%
13963         /Fields[\HyField@afields]%
13964         \ifx\HyField@cofields\ltx@empty
13965           \else
13966             /CO[\romannumeral-`\Q\HyField@cofields]%
13967           \fi
13968         /DR<<%
13969         /Font<<%
13970         /ZaDb \OBJ@ZaDb\space 0 R%
13971         /Helv \OBJ@Helv\space 0 R%
13972         >>%
13973       >>%
13974       /DA(/Helv 10 Tf 0 g)%
13975       \ifHy@pdfa
13976       \else
13977         \ifHyField@NeedAppearances
13978           /NeedAppearances true%
13979         \fi
13980       \fi
13981       >>%
13982     }%
13983     \edef\OBJ@acroform{\the\pdfastobj}%
13984     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13985   }%
13986 }%
13987 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13988   \begingroup
13989     \fontfamily{pzd}%
13990     \fontencoding{U}%
13991     \fontseries{m}%
13992     \fontshape{n}%
13993     \selectfont
13994     \char123 %
13995   \endgroup
13996 }{Ding}%
13997 \MakeFieldObject{%
13998   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13999 }{Submit}%
14000 \MakeFieldObject{%
14001   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
14002 }{SubmitP}%
14003 }
14004 \let\@endForm\ltx@empty

```

```

14005 \let\HyAnn@AbsPageLabel\ltx@empty
14006 \let\Fld@pageobjref\ltx@empty
14007 \ltx@ifUndefined{pdfpageref}{%
14008 }{%
14009 \ltx@ifpackageloaded{zref-abspage}{%
14010 \newcount\HyAnn@Count
14011 \HyAnn@Count=\ltx@zero
14012 \def\HyAnn@AbsPageLabel{%
14013 \global\advance\HyAnn@Count by\ltx@one
14014 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
14015 \zref@refused{HyAnn@\the\HyAnn@Count}%
14016 }%
14017 \def\Fld@pageobjref{%
14018 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
14019 }{%
14020 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
14021 /P \pdfpageref
14022 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
14023 \space 0 R%
14024 }{%
14025 }%
14026 }%
14027 }%
14028 }{%
14029 }%
14030 }

14031 \def\@TextField[#1]#2{% parameters, label
14032 \def\Fld@name{#2}%
14033 \let\Fld@default\ltx@empty
14034 \let\Fld@value\@empty
14035 \def\Fld@width{\DefaultWidthofText}%
14036 \def\Fld@height{%
14037 \ifFld@multiline
14038 \DefaultHeightofTextMultiline
14039 \else
14040 \DefaultHeightofText
14041 \fi
14042 }%
14043 \begingroup
14044 \expandafter\HyField@SetKeys\expandafter{%
14045 \DefaultOptionsofText,#1%
14046 }%
14047 \PDFForm@Name
14048 \HyField@FlagsText
14049 \ifFld@hidden\def\Fld@width{1sp}\fi
14050 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14051 \LayoutTextField{#2}{%
14052 \leavevmode
14053 \HyAnn@AbsPageLabel
14054 \Hy@escapeform\PDFForm@Text
14055 \pdfstartlink user {\PDFForm@Text}\relax
14056 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14057 \HyField@AddToFields
14058 }%
14059 \endgroup
14060 }
14061 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

14062 \def\Fld@name{#2}%
14063 \let\Fld@default\relax
14064 \let\Fld@value\relax
14065 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14066 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14067 \begingroup
14068 \Fld@menulength=0 %
14069 \@tempdima\z@
14070 \@for\@curropt:=#3\do{%
14071 \expandafter\Fld@checkequals\@curropt==\%
14072 \Hy@StepCount\Fld@menulength
14073 \settowidth{\@tempdimb}{\@currDisplay}%
14074 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14075 }%
14076 \advance\@tempdima by 15\p@
14077 \begingroup
14078 \HyField@SetKeys{#1}%
14079 \edef\x{\endgroup
14080 \noexpand\expandafter
14081 \noexpand\HyField@SetKeys
14082 \noexpand\expandafter{%
14083 \expandafter\noexpand\curname DefaultOptionsof%
14084 \ifFld@radio
14085 Radio%
14086 \else
14087 \ifFld@combo
14088 \ifFld@popdown
14089 PopdownBox%
14090 \else
14091 ComboBox%
14092 \fi
14093 \else
14094 ListBox%
14095 \fi
14096 \fi
14097 \endcurname
14098 }%
14099 }\x
14100 \HyField@SetKeys{#1}%
14101 \PDFForm@Name
14102 \ifFld@hidden\def\Fld@width{1sp}\fi
14103 \ifx\Fld@value\relax
14104 \let\Fld@value\Fld@default
14105 \fi
14106 \LayoutChoiceField{#2}{%
14107 \ifFld@radio
14108 \HyField@FlagsRadioButton
14109 \@@Radio{#3}%
14110 \else
14111 \begingroup
14112 \HyField@FlagsChoice
14113 \ifdim\Fld@width<\@tempdima
14114 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14115 \edef\Fld@width{\the\@tempdima}%
14116 \fi
14117 \ifFld@combo
14118 \else

```

```

14119         \@tempdima=\the\Fld@menulength\Fld@charsize
14120         \advance\@tempdima by \Fld@borderwidth bp %
14121         \advance\@tempdima by \Fld@borderwidth bp %
14122         \edef\Fld@height{\the\@tempdima}%
14123     \fi
14124     \@@ListBox{#3}%
14125 \endgroup
14126 \fi
14127 }%
14128 \endgroup
14129 }
14130 \def\@@Radio#1{%
14131     \Fld@listcount=0 %
14132     \EdefEscapeName\Fld@default{\Fld@default}%
14133     \@for\@curropt:=#1\do{%
14134         \expandafter\Fld@checkequals\@curropt==\%
14135         \EdefEscapeName\@currValue{\@currValue}%
14136         \Hy@StepCount\Fld@listcount
14137         \@currDisplay\space
14138         \leavevmode
14139         \HyAnn@AbsPageLabel
14140         \Hy@escapeform\PDFForm@Radio
14141         \pdfstartlink user {%
14142             \PDFForm@Radio
14143             /AP<<%
14144             /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.

```

14145         /\@currValue\space \DingObject
14146         >>%
14147         >>%
14148     }%
14149     \relax
14150     \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14151     \ifnum\Fld@listcount=1 %
14152         \HyField@AddToFields
14153     \fi
14154     \space % deliberate space between radio buttons
14155 }%
14156 }
14157 \newcount\Fld@listcount
14158 \def\@@ListBox#1{%
14159     \HyField@PDFChoices{#1}%
14160     \leavevmode
14161     \HyAnn@AbsPageLabel
14162     \Hy@escapeform\PDFForm@List
14163     \pdfstartlink user {\PDFForm@List}\relax
14164     \MakeChoiceField{\Fld@width}{\Fld@height}%
14165     \pdfendlink
14166     \HyField@AddToFields
14167 }
14168 \def\@PushButton[#1]#2{% parameters, label
14169     \def\Fld@name{#2}%
14170     \begingroup
14171         \expandafter\HyField@SetKeys\expandafter{%
14172             \DefaultOptionsofPushButton,#1%

```

```

14173 }%
14174 \PDFForm@Name
14175 \ifHy@pdfa
14176 \Hy@Error{%
14177     PDF/A: Push button with JavaScript is prohibited%
14178 } \@ehc
14179 \LayoutPushButtonField{%
14180     \leavevmode
14181     \MakeButtonField{#2}%
14182 }%
14183 \else
14184 \HyField@FlagsPushButton
14185 \ifFld@hidden\def\Fld@width{1sp}\fi
14186 \LayoutPushButtonField{%
14187     \leavevmode
14188     \HyAnn@AbsPageLabel
14189     \Hy@escapeform\PDFForm@Push
14190     \pdfstartlink user {\PDFForm@Push}\relax
14191     \MakeButtonField{#2}%
14192     \pdfendlink
14193     \HyField@AddToFields
14194 }%
14195 \fi
14196 \endgroup
14197 }
14198 \def\@Submit[#1]#2{%
14199     \def\Fld@width{\DefaultWidthofSubmit}%
14200     \def\Fld@height{\DefaultHeightofSubmit}%
14201     \begingroup
14202     \expandafter\HyField@SetKeys\expandafter{%
14203         \DefaultOptionsofSubmit,#1%
14204     }%
14205     \HyField@FlagsPushButton
14206     \HyField@FlagsSubmit
14207     \ifFld@hidden\def\Fld@width{1sp}\fi
14208     \leavevmode
14209     \HyAnn@AbsPageLabel
14210     \Hy@escapeform\PDFForm@Submit
14211     \pdfstartlink user {%
14212         \PDFForm@Submit
14213         /AP<</N \SubmitObject/D \SubmitPObject>>%
14214     }%
14215     \relax
14216     \MakeButtonField{#2}%
14217     \pdfendlink
14218     \HyField@AddToFields
14219 \endgroup
14220 }
14221 \def\@Reset[#1]#2{%
14222     \def\Fld@width{\DefaultWidthofReset}%
14223     \def\Fld@height{\DefaultHeightofReset}%
14224     \begingroup
14225     \expandafter\HyField@SetKeys\expandafter{%
14226         \DefaultOptionsofReset,#1%
14227     }%
14228     \leavevmode
14229     \ifHy@pdfa

```

```

14230 \Hy@Error{%
14231 PDF/A: Reset action is prohibited%
14232 } \@ehc
14233 \MakeButtonField{#2}%
14234 \else
14235 \HyField@FlagsPushButton
14236 \ifFld@hidden\def\Fld@width{1sp}\fi
14237 \HyAnn@AbsPageLabel
14238 \Hy@escapeform\PDFForm@Reset
14239 \pdfstartlink user {\PDFForm@Reset}\relax
14240 \MakeButtonField{#2}%
14241 \pdfendlink
14242 \HyField@AddToFields
14243 \fi
14244 \endgroup
14245 }
14246 \def\@CheckBox[#1]#2{% parameters, label
14247 \def\Fld@name{#2}%
14248 \def\Fld@default{0}%
14249 \begingroup
14250 \def\Fld@width{\DefaultWidthofCheckBox}%
14251 \def\Fld@height{\DefaultHeightofCheckBox}%
14252 \expandafter\HyField@SetKeys\expandafter{%
14253 \DefaultOptionsofCheckBox,#1%
14254 }%
14255 \PDFForm@Name
14256 \HyField@FlagsCheckBox
14257 \ifFld@hidden\def\Fld@width{1sp}\fi
14258 \LayoutCheckField{#2}{%
14259 \leavevmode
14260 \HyAnn@AbsPageLabel
14261 \Hy@escapeform\PDFForm@Check
14262 \pdfstartlink user {\PDFForm@Check}\relax
14263 \MakeCheckField{\Fld@width}{\Fld@height}%
14264 \pdfendlink
14265 \HyField@AddToFields
14266 }%
14267 \endgroup
14268 }
14269 \def\Hy@FormObjects{%
14270 \pdfobj {%
14271 <<%
14272 /Type/Encoding%
14273 /Differences[%
14274 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14275 /ring/tilde %
14276 39/quotesingle %
14277 96/grave %
14278 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14279 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14280 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14281 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14282 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14283 164/currency %
14284 166/brokenbar %
14285 168/dieresis/copyright/ordfeminine %
14286 172/logicalnot/.notdef/registered/macron/degree/plusminus%

```



```

14287      /twosuperior/threesuperior/acute/mu %
14288      183/periodcentered/cedilla/onesuperior/ordmasculine %
14289      188/onequarter/onehalf/threequarters %
14290      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14291      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14292      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14293      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14294      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14295      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14296      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14297      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14298      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14299      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14300      ]%
14301      >>%
14302      }%
14303      \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
14304      \pdfobj{%
14305      <<%
14306      /Type/Font%
14307      /Subtype/Type1%
14308      /Name/ZaDb%
14309      /BaseFont/ZapfDingbats%
14310      >>%
14311      }%
14312      \xdef\OBJ@ZaDb{\the\pdfflastobj}%
14313      \pdfobj{%
14314      <<%
14315      /Type/Font%
14316      /Subtype/Type1%
14317      /Name/Helv%
14318      /BaseFont/Helvetica%
14319      /Encoding \OBJ@pdfdocencoding\space 0 R%
14320      >>%
14321      }%
14322      \xdef\OBJ@Helv{\the\pdfflastobj}%
14323      \global\let\Hy@FormObjects\relax
14324      }
14325      </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.

```

14326 (*dvipdfm | xetex)

```

\@Gauge

```

14327 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14328   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14329 }

```

\@Form

```

14330 \def\@Form[#1]{%
14331   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14332   \kvsetkeys{Form}{#1}%
14333   \Hy@FormObjects
14334   \@pdfm@mark{obj @afields []}%
14335   \@pdfm@mark{obj @corder []}%

```

```

14336 \@pdfm@mark{%
14337   obj @aform <<%
14338     /Fields @afields%
14339     /DR<<%
14340     /Font<<%
14341     /ZaDb @OBJZaDb%
14342     /Helv @OBJHelv%
14343     >>%
14344     >>%
14345     /DA(/Helv 10 Tf 0 g)%
14346     /CO @corder%
14347     \ifHy@pdfa
14348     \else
14349       \ifHyField@NeedAppearances
14350         /NeedAppearances true%
14351       \fi
14352     \fi
14353     >>%
14354   }%
14355 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14356 }

\@endForm

14357 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
14358 \def\dvipdfm@setdim{%
14359   height \the\ht\pdfm@box\space
14360   width \the\wd\pdfm@box\space
14361   depth \the\dp\pdfm@box\space
14362 }

\HyField@AnnotCount
14363 \newcount\HyField@AnnotCount
14364 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
14365 \def\HyField@AdvanceAnnotCount{%
14366   \global\advance\HyField@AnnotCount\@ne
14367 }

\HyField@TheAnnotCount
14368 \def\HyField@TheAnnotCount{%
14369   \the\HyField@AnnotCount
14370 }

\Fld@pageobjref
14371 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
14372 \def\HyField@AddToFields#1{%
14373   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14374   \ifx\Fld@calculate@code\ltx@empty
14375   \else
14376     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14377   \fi
14378 }

```

\@TextField

```

14379 \def\@TextField[#1]#2{% parameters, label
14380 \def\Fld@name{#2}%
14381 \let\Fld@default\ltx@empty
14382 \let\Fld@value\@empty
14383 \def\Fld@width{\DefaultWidthofText}%
14384 \def\Fld@height{%
14385 \ifFld@multiline
14386 \DefaultHeightofTextMultiline
14387 \else
14388 \DefaultHeightofText
14389 \fi
14390 }%
14391 \begingroup
14392 \expandafter\HyField@SetKeys\expandafter{%
14393 \DefaultOptionsofText,#1%
14394 }%
14395 \PDFForm@Name
14396 \HyField@FlagsText
14397 \ifFld@hidden\def\Fld@width{1sp}\fi
14398 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14399 \setbox\pdfm@box=\hbox{%
14400 \MakeTextField{\Fld@width}{\Fld@height}%
14401 }%
14402 \HyField@AdvanceAnnotCount
14403 \LayoutTextField{#2}{%
14404 \leavevmode
14405 \Hy@escapeform\PDFForm@Text
14406 \@pdfm@mark{%
14407 ann @text\HyField@TheAnnotCount\space
14408 \dvi pdfm@setdim << \PDFForm@Text >>%
14409 }%
14410 }%
14411 \unhbox\pdfm@box
14412 \HyField@AddToFields{text}%
14413 % record in @afields array
14414 \endgroup
14415 }

```

\@ChoiceMenu

```

14416 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14417 \def\Fld@name{#2}%
14418 \let\Fld@default\relax
14419 \let\Fld@value\relax
14420 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14421 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14422 \begingroup
14423 \Fld@menulength=0 %
14424 \@tempdima\z@
14425 \@for\@curropt:=#3\do{%
14426 \expandafter\Fld@checkequals\@curropt==\%
14427 \Hy@StepCount\Fld@menulength
14428 \settowidth{\@tempdimb}{\@currDisplay}%
14429 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14430 }%
14431 \advance\@tempdima by 15\p@
14432 \begingroup

```

```

14433 \HyField@SetKeys{#1}%
14434 \edef\x{\endgroup
14435 \noexpand\expandafter
14436 \noexpand\HyField@SetKeys
14437 \noexpand\expandafter{%
14438 \expandafter\noexpand\csname DefaultOptionsof%
14439 \ifFld@radio
14440 Radio%
14441 \else
14442 \ifFld@combo
14443 \ifFld@popdown
14444 PopdownBox%
14445 \else
14446 ComboBox%
14447 \fi
14448 \else
14449 ListBox%
14450 \fi
14451 \fi
14452 \endcsname
14453 }%
14454 }\x
14455 \HyField@SetKeys{#1}%
14456 \PDFForm@Name
14457 \ifFld@hidden\def\Fld@width{1sp}\fi
14458 \ifx\Fld@value\relax
14459 \let\Fld@value\Fld@default
14460 \fi
14461 \LayoutChoiceField{#2}{%
14462 \ifFld@radio
14463 \HyField@FlagsRadioButton
14464 \@@Radio{#3}%
14465 \else
14466 \begingroup
14467 \HyField@FlagsChoice
14468 \ifdim\Fld@width<\@tempdima
14469 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14470 \edef\Fld@width{\the\@tempdima}%
14471 \fi
14472 \ifFld@combo
14473 \else
14474 \@tempdima=\the\Fld@menulength\Fld@charsize
14475 \advance\@tempdima by \Fld@borderwidth bp %
14476 \advance\@tempdima by \Fld@borderwidth bp %
14477 \edef\Fld@height{\the\@tempdima}%
14478 \fi
14479 \@@ListBox{#3}%
14480 \endgroup
14481 \fi
14482 }%
14483 \endgroup
14484 }

```

\@@Radio

```

14485 \def\@@Radio#1{%
14486 \Fld@listcount=0 %
14487 \EdefEscapeName\Fld@default{\Fld@default}%
14488 \setbox\pdfm@box=\hbox{%

```

```

14489 \MakeRadioField{\Fld@width}{\Fld@height}%
14490 }%
14491 \@for\@curropt:=#1\do{%
14492 \expandafter\Fld@checkequals\@curropt==\%
14493 \EdefEscapeName\@currValue{\@currValue}%
14494 \Hy@StepCount\Fld@listcount
14495 \@currDisplay\space
14496 \leavevmode
14497 \Hy@escapeform\PDFForm@Radio
14498 \ifnum\Fld@listcount=1 %
14499 \HyField@AdvanceAnnotCount
14500 \fi
14501 \@pdfm@mark{%
14502 ann %
14503 \ifnum\Fld@listcount=1 %
14504 @radio\HyField@TheAnnotCount%
14505 \space
14506 \fi
14507 \dvipdfm@setdim
14508 <<%
14509 \PDFForm@Radio
14510 /AP<</N<</\@currValue /null>>>>%
14511 >>%
14512 }%
14513 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14514 \ifnum\Fld@listcount=1 %
14515 \HyField@AddToFields{radio}%
14516 \fi
14517 }%
14518 }

\Fld@listcount
14519 \newcount\Fld@listcount

@@@Listbox
14520 \def\@@Listbox#1{%
14521 \HyField@PDFChoices{#1}%
14522 \setbox\pdfm@box=\hbox{%
14523 \MakeChoiceField{\Fld@width}{\Fld@height}%
14524 }%
14525 \leavevmode
14526 \Hy@escapeform\PDFForm@List
14527 \HyField@AdvanceAnnotCount
14528 \@pdfm@mark{%
14529 ann @list\HyField@TheAnnotCount\space
14530 \dvipdfm@setdim
14531 <<\PDFForm@List>>%
14532 }%
14533 \unhbox\pdfm@box
14534 \HyField@AddToFields{list}%
14535 }

@@PushButton
14536 \def\@PushButton[#1]#2{% parameters, label
14537 \def\Fld@name{#2}%
14538 \begingroup
14539 \expandafter\HyField@SetKeys\expandafter{%

```

```

14540 \DefaultOptionsofPushButton,#1%
14541 }%
14542 \PDFForm@Name
14543 \ifHy@pdfa
14544 \Hy@Error{%
14545 PDF/A: Push button with JavaScript is prohibited%
14546 } \@ehc
14547 \LayoutPushButtonField{%
14548 \leavevmode
14549 \MakeButtonField{#2}%
14550 }%
14551 \else
14552 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14553 \HyField@FlagsPushButton
14554 \ifFld@hidden\def\Fld@width{1sp}\fi
14555 \HyField@AdvanceAnnotCount
14556 \LayoutPushButtonField{%
14557 \leavevmode
14558 \Hy@escapeform\PDFForm@Push
14559 \@pdfm@mark{%
14560 ann @push\HyField@TheAnnotCount\space
14561 \dvi pdfm@setdim
14562 <<\PDFForm@Push>>%
14563 }%
14564 }%
14565 \unhbox\pdfm@box
14566 \HyField@AddToFields{push}%
14567 \fi
14568 \endgroup
14569 }

\@Submit
14570 \def\@Submit[#1]#2{%
14571 \def\Fld@width{\DefaultWidthofSubmit}%
14572 \def\Fld@height{\DefaultHeightofSubmit}%
14573 \begingroup
14574 \expandafter\HyField@SetKeys\expandafter{%
14575 \DefaultOptionsofSubmit,#1%
14576 }%
14577 \HyField@FlagsPushButton
14578 \HyField@FlagsSubmit
14579 \ifFld@hidden\def\Fld@width{1sp}\fi
14580 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14581 \leavevmode
14582 \Hy@escapeform\PDFForm@Submit
14583 \HyField@AdvanceAnnotCount
14584 \@pdfm@mark{%
14585 ann @submit\HyField@TheAnnotCount\space
14586 \dvi pdfm@setdim
14587 <<\PDFForm@Submit>>%
14588 }%
14589 \unhbox\pdfm@box%
14590 \HyField@AddToFields{submit}%
14591 \endgroup
14592 }

\@Reset

```

```

14593 \def\@Reset[#1]#2{%
14594   \def\Fld@width{\DefaultWidthofReset}%
14595   \def\Fld@height{\DefaultHeightofReset}%
14596   \begingroup
14597     \expandafter\HyField@SetKeys\expandafter{%
14598       \DefaultOptionsofReset,#1%
14599     }%
14600     \leavevmode
14601     \ifHy@pdfa
14602       \Hy@Error{%
14603         PDF/A: Reset action is prohibited%
14604       }\@ehc
14605       \MakeButtonField{#2}%
14606     \else
14607       \HyField@FlagsPushButton
14608       \ifFld@hidden\def\Fld@width{1sp}\fi
14609       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14610       \Hy@escapeform\PDFForm@Reset
14611       \HyField@AdvanceAnnotCount
14612       \@pdfm@mark{%
14613         ann @reset\HyField@TheAnnotCount\space
14614         \dvipdfm@setdim
14615         <<\PDFForm@Reset>>%
14616       }%
14617       \unhbox\pdfm@box
14618       \HyField@AddToFields{reset}%
14619     \fi
14620   \endgroup
14621 }

```

\@CheckBox

```

14622 \def\@CheckBox[#1]#2{% parameters, label
14623   \def\Fld@name{#2}%
14624   \def\Fld@default{0}%
14625   \begingroup
14626     \def\Fld@width{\DefaultWidthofCheckBox}%
14627     \def\Fld@height{\DefaultHeightofCheckBox}%
14628     \expandafter\HyField@SetKeys\expandafter{%
14629       \DefaultOptionsofCheckBox,#1%
14630     }%
14631     \PDFForm@Name
14632     \HyField@FlagsCheckBox
14633     \ifFld@hidden\def\Fld@width{1sp}\fi
14634     \setbox\pdfm@box=\hbox{%
14635       \MakeCheckField{\Fld@width}{\Fld@height}%
14636     }%
14637     \HyField@AdvanceAnnotCount
14638     \LayoutCheckField{#2}{%
14639       \leavevmode
14640       \Hy@escapeform\PDFForm@Check
14641       \@pdfm@mark{%
14642         ann @check\HyField@TheAnnotCount\space
14643         \dvipdfm@setdim
14644         <<\PDFForm@Check>>%
14645       }%
14646       \unhbox\pdfm@box
14647       \HyField@AddToFields{check}%
14648     }%

```

```

14649 \endgroup
14650 }

14651 \def\Hy@FormObjects{%
14652 \@pdfm@mark{obj @OBJpdfdocencoding%
14653 <<%
14654 /Type/Encoding%
14655 /Differences[%
14656 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14657 39/quotesingle %
14658 96/grave %
14659 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14660 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14661 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14662 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14663 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14664 164/currency %
14665 166/brokenbar %
14666 168/dieresis/copyright/ordfeminine %
14667 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14668 /twosuperior/threesuperior/acute/mu %
14669 183/periodcentered/cedilla/onesuperior/ordmasculine %
14670 188/onequarter/onehalf/threequarters %
14671 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14672 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14673 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14674 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14675 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14676 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14677 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14678 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14679 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14680 /thorn/ydieresis%
14681 ]%
14682 >>%
14683 }%
14684 \@pdfm@mark{obj @OBJZaDb%
14685 <<%
14686 /Type/Font%
14687 /Subtype/Type1%
14688 /Name/ZaDb%
14689 /BaseFont/ZapfDingbats%
14690 >>%
14691 }%
14692 \@pdfm@mark{obj @OBJHelv%
14693 <<%
14694 /Type/Font%
14695 /Subtype/Type1%
14696 /Name/Helv%
14697 /BaseFont/Helvetica%
14698 /Encoding @OBJpdfdocencoding%
14699 >>%
14700 }%
14701 \global\let\Hy@FormObjects\relax
14702 }
14703 </dvipdfm | xetex>

```


48.6 Common forms part

```

14704 <*pdfform>

\Fld@pageobjref
14705 \providecommand*{\Fld@pageobjref}{%

\Hy@escapestring
14706 \begingroup\expandafter\expandafter\expandafter\endgroup
14707 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14708   \let\Hy@escapestring\@firstofone
14709   \def\Hy@escapeform#1{%
14710     \ifHy@pdfescapeform
14711       \def\Hy@escapestring##1{%
14712         \noexpand\Hy@escapestring{\noexpand##1}%
14713       }%
14714     \edef\Hy@temp{#1}%
14715     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14716     \def\Hy@escapestring##1{%
14717       \@ifundefined{Hy@esc@\string##1}{%
14718         ##1%
14719         \ThisShouldNotHappen
14720       }{%
14721         \csname Hy@esc@\string##1\endcsname
14722       }%
14723     }%
14724   \else
14725     \let\Hy@escapestring\@firstofone
14726   \fi
14727 }%
14728 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14729   \ifx\#3\%
14730     \else
14731       \expandafter
14732       \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14733       \ltx@ReturnAfterFi{%
14734         \Hy@@escapeform#3\@nil
14735       }%
14736     \fi
14737   }%
14738 \else
14739   \def\Hy@escapeform#1{%
14740     \ifHy@pdfescapeform
14741       \let\Hy@escapestring\pdfescapestring
14742     \else
14743       \let\Hy@escapestring\@firstofone
14744     \fi
14745   }%
14746   \Hy@escapeform{}%
14747 \fi

\PDFForm@Name
14748 \def\PDFForm@Name{%
14749   \PDFForm@@Name\Fld@name
14750   \ifx\Fld@altname\relax
14751   \else
14752     \PDFForm@@Name\Fld@altname
14753   \fi

```

```

14754 \ifx\Fld@mappingname\relax
14755 \else
14756 \PDFForm@@Name\Fld@mappingname
14757 \fi
14758 }

```

\PDFForm@@Name

```

14759 \def\PDFForm@@Name#1{%
14760 \begingroup
14761 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14762 \ifHy@unicode
14763 \Hy@unicodetrue
14764 \fi
14765 \fi
14766 \HyPsd@XeTeXBigCharstrue
14767 \pdfstringdef\Hy@gtemp#1%
14768 \endgroup
14769 \let#1\Hy@gtemp
14770 }

```

\Fld@additionalactions

```

14771 \def\Fld@@additionalactions{%
K input (keystroke) format
14772 \ifx\Fld@keystroke@code\@empty
14773 \else
14774 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14775 \fi
F display format
14776 \ifx\Fld@format@code\@empty
14777 \else
14778 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14779 \fi
V validation
14780 \ifx\Fld@validate@code\@empty
14781 \else
14782 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14783 \fi
C calculation
14784 \ifx\Fld@calculate@code\@empty
14785 \else
14786 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14787 \fi
Fo receiving the input focus
14788 \ifx\Fld@onfocus@code\@empty
14789 \else
14790 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14791 \fi
Bl loosing the input focus (blurred)
14792 \ifx\Fld@onblur@code\@empty
14793 \else
14794 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14795 \fi

```

D pressing the mouse button (down)

```
14796 \ifx\Fld@onmousedown@code\@empty
14797 \else
14798 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14799 \fi
```

U releasing the mouse button (up)

```
14800 \ifx\Fld@onmouseup@code\@empty
14801 \else
14802 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14803 \fi
```

E cursor enters the annotation's active area.

```
14804 \ifx\Fld@onenter@code\@empty
14805 \else
14806 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14807 \fi
```

X cursor exits the annotation's active area.

```
14808 \ifx\Fld@onexit@code\@empty
14809 \else
14810 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14811 \fi
14812 }
14813 \def\Fld@additionalactions{%
14814 \if-\Fld@@additionalactions-%
14815 \else
14816 \ifHy@pdfa
14817 \else
14818 /AA<<\Fld@@additionalactions>>%
14819 \fi
14820 \fi
14821 }
```

\Fld@annotnames

```
14822 \def\Fld@annotnames{%
14823 /T(\Fld@name)%
14824 \ifx\Fld@altname\relax
14825 \else
14826 /TU(\Fld@altname)%
14827 \fi
14828 \ifx\Fld@mappingname\relax
14829 \else
14830 /TM(\Fld@mappingname)%
14831 \fi
14832 }
```

\PDFForm@Check

```
14833 \def\PDFForm@Check{%
14834 /Subtype/Widget%
14835 \Fld@annotflags
14836 \Fld@pageobjref
14837 \Fld@annotnames
14838 /FT/Btn%
14839 \Fld@flags
14840 /Q \Fld@align
14841 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14842 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
```

```

14843 /MK<<%
14844   \ifnum\Fld@rotation=\z@
14845   \else
14846     /R \Fld@rotation
14847   \fi
14848   \ifx\Fld@bordercolor\relax
14849   \else
14850     /BC[\Fld@bordercolor]%
14851   \fi
14852   \ifx\Fld@bcolor\relax
14853   \else
14854     /BG[\Fld@bcolor]%
14855   \fi
14856   /CA(\Hy@escapestring{\Fld@cbsymbol})%
14857 >>%
14858 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14859   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14860 /H/P%
14861 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14862 \Fld@additionalactions
14863 }

```

\PDFForm@Push

```

14864 \ifHy@pdfa
14865 \else
14866   \def\PDFForm@Push{%
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     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14876       \ifx\Fld@bordercolor\relax\else 1\fi
14877       \space
14878     \else
14879       /MK<<%
14880       \ifnum\Fld@rotation=\z@
14881       \else
14882         /R \Fld@rotation
14883       \fi
14884       \ifx\Fld@bordercolor\relax
14885       \else
14886         /BC[\Fld@bordercolor]%
14887       \fi
14888       >>%
14889     \fi
14890     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14891     \Fld@additionalactions
14892   }%
14893 \fi

```

\PDFForm@List

```

14894 \def\PDFForm@List{%
14895   /Subtype/Widget%

```

```

14896 \Fld@annotflags
14897 \Fld@pageobjref
14898 \Fld@annotnames
14899 /FT/Ch%
14900 \Fld@flags
14901 /Q \Fld@align
14902 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14903 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14904     \ifx\Fld@bordercolor\relax\else 1\fi
14905     \ifx\Fld@bcolor\relax \else 1\fi
14906     \space
14907 \else
14908 /MK<<%
14909     \ifnum\Fld@rotation=\z@
14910     \else
14911     /R \Fld@rotation
14912     \fi
14913     \ifx\Fld@bordercolor\relax
14914     \else
14915     /BC[\Fld@bordercolor]%
14916     \fi
14917     \ifx\Fld@bcolor\relax
14918     \else
14919     /BG[\Fld@bcolor]%
14920     \fi
14921 >>%
14922 \fi
14923 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14924     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14925 \Fld@choices
14926 \Fld@additionalactions
14927 }

```

\PDFForm@Radio

```

14928 \def\PDFForm@Radio{%
14929 /Subtype/Widget%
14930 \Fld@annotflags
14931 \Fld@pageobjref
14932 \Fld@annotnames
14933 /FT/Btn%
14934 \Fld@flags
14935 /H/P%
14936 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14937 /MK<<%
14938     \ifnum\Fld@rotation=\z@
14939     \else
14940     /R \Fld@rotation
14941     \fi
14942     \ifx\Fld@bordercolor\relax
14943     \else
14944     /BC[\Fld@bordercolor]%
14945     \fi
14946     \ifx\Fld@bcolor\relax
14947     \else
14948     /BG[\Fld@bcolor]%
14949     \fi
14950 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14951 >>%

```

```

14952 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14953 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14954 \ifx\Fld@default\@empty
14955 /V/Off%
14956 /DV/Off%
14957 \else
14958 /V/\Fld@default
14959 /DV/\Fld@default
14960 \fi
14961 \Fld@additionalactions
14962 }

```

\PDFForm@Text

```

14963 \def\PDFForm@Text{%
14964 /Subtype/Widget%
14965 \Fld@annotflags
14966 \Fld@pageobjref
14967 \Fld@annotnames
14968 /FT/Tx%
14969 \Fld@flags
14970 /Q \Fld@align
14971 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14972 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14973 \ifx\Fld@bordercolor\relax\else 1\fi
14974 \ifx\Fld@bcolor\relax \else 1\fi
14975 \space
14976 \else
14977 /MK<<%
14978 \ifnum\Fld@rotation=\z@
14979 \else
14980 /R \Fld@rotation
14981 \fi
14982 \ifx\Fld@bordercolor\relax
14983 \else
14984 /BC[\Fld@bordercolor]%
14985 \fi
14986 \ifx\Fld@bcolor\relax
14987 \else
14988 /BG[\Fld@bcolor]%
14989 \fi
14990 >>%
14991 \fi
14992 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14993 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14994 /DV(\Hy@escapestring{\Fld@default})%
14995 /V(\Hy@escapestring{\Fld@value})%
14996 \Fld@additionalactions
14997 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14998 }

```

\PDFForm@Submit

```

14999 \def\PDFForm@Submit{%
15000 /Subtype/Widget%
15001 \Fld@annotflags
15002 \Fld@pageobjref
15003 \Fld@annotnames

```

```

15004 /FT/Btn%
15005 \Fld@flags
15006 /H/P%
15007 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15008 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15009 \ifx\Fld@bordercolor\relax\else 1\fi
15010 \space
15011 \else
15012 /MK<<%
15013 \ifnum\Fld@rotation=\z@
15014 \else
15015 /R \Fld@rotation
15016 \fi
15017 \ifx\Fld@bordercolor\relax
15018 \else
15019 /BC[\Fld@bordercolor]%
15020 \fi
15021 >>%
15022 \fi
15023 /A<<%
15024 /S/SubmitForm%
15025 /F<<%
15026 /FS/URL%
15027 /F(\Hy@escapestring{\Form@action})%
15028 >>%
15029 \Fld@submitflags
15030 >>%
15031 \Fld@additionalactions
15032 }

```

\PDFForm@Reset

```

15033 \ifHy@pdfa
15034 \else
15035 \def\PDFForm@Reset{%
15036 /Subtype/Widget%
15037 \Fld@annotflags
15038 \Fld@pageobjref
15039 \Fld@annotnames
15040 /FT/Btn%
15041 \Fld@flags
15042 /H/P%
15043 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15044 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15045 \ifx\Fld@bordercolor\relax\else 1\fi
15046 \space
15047 \else
15048 /MK<<%
15049 \ifnum\Fld@rotation=\z@
15050 \else
15051 /R \Fld@rotation
15052 \fi
15053 \ifx\Fld@bordercolor\relax
15054 \else
15055 /BC[\Fld@bordercolor]%
15056 \fi
15057 % /CA (Clear)
15058 % /AC (Done)
15059 >>%

```

```

15060 \fi
15061 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15062 /A<</S/ResetForm>>%
15063 \Fld@additionalactions
15064 }%
15065 \fi

15066 </pdfform>
15067 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

15068 \def\phantomsection{%
15069 \Hy@MakeCurrentHrefAuto{section*}%
15070 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15071 }
15072 </package>

```

49.1 Bookmarks

```
15073 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -T_EX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -T_EX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

15074 \def\Hy@writebookmark#1#2#3#4#5{%
15075 % section number, text, label, level, file
15076 \ifx\WriteBookmarks\relax%
15077 \else
15078 \ifnum#4>\Hy@bookmarksdepth\relax
15079 \else
15080 \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15081 \fi
15082 \fi

```



```

15083 }
15084 \def\Hy@currentbookmarklevel{0}
15085 \def\Hy@numberline#1{#1 }
15086 \def\@writetorep#1#2#3#4#5{%
15087   \begingroup
15088     \edef\Hy@tempa{#5}%
15089     \ifx\Hy@tempa\Hy@bookmarkstype
15090       \edef\Hy@level{#4}%
15091       \ifx\Hy@levelcheck Y%
15092         \@tempcnta\Hy@level\relax
15093         \advance\@tempcnta by -1 %
15094         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15095           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15096           \advance\@tempcnta by 1 %
15097           \Hy@Warning{%
15098             Difference (\the\@tempcnta) between bookmark levels is %
15099             greater \MessageBreak than one, level fixed%
15100           }%
15101           \@tempcnta\Hy@currentbookmarklevel
15102           \advance\@tempcnta by 1 %
15103           \edef\Hy@level{\the\@tempcnta}%
15104         \fi
15105       \else
15106         \global\let\Hy@levelcheck Y%
15107       \fi
15108       \global\let\Hy@currentbookmarklevel\Hy@level
15109       \@tempcnta\Hy@level\relax
15110       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15111       \advance\@tempcnta by -1 %
15112       \edef\Hy@tempa{#3}%
15113       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15114       \ifx\Hy@tempa\Hy@tempb
15115         \Hy@Warning{%
15116           The anchor of a bookmark and its parent's must not%
15117           \MessageBreak be the same. Added a new anchor%
15118         }%
15119       \phantomsection
15120     \fi
15121     \ifHy@bookmarksnumbered
15122       \let\numberline\Hy@numberline
15123       \let\booknumberline\Hy@numberline
15124       \let\partnumberline\Hy@numberline
15125       \let\chapternumberline\Hy@numberline
15126     \else
15127       \let\numberline\@gobble
15128       \let\booknumberline\@gobble
15129       \let\partnumberline\@gobble
15130       \let\chapternumberline\@gobble
15131     \fi
15132     \HyPsd@XeTeXBigCharstrue
15133     \pdfstringdef\Hy@tempa{#2}%
15134     \HyPsd@SanitizeForOutFile\Hy@tempa
15135     \if@filesw
15136       \stepcounter{bookmark@seq@number}%
15137       \@ifundefined{@outlinefile}{%
15138       }{%
15139         \protected@write\@outlinefile{%

```

```

15140         \protect\BOOKMARK
15141         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15142         {\Hy@tempa}{\Hy@tempb}%
15143         \@percentchar\space\thebookmark@seq@number
15144     }%
15145 }%
15146 \fi
15147 \fi
15148 \endgroup
15149 }
15150 \newcounter{bookmark@seq@number}

15151 \begingroup
15152 \lccode`=(`{%
15153 \lccode`=}`{%
15154 \lccode`1=\z@
15155 \lccode`2=\z@
15156 \lccode`3=\z@
15157 \lccode`5=\z@
15158 \lccode`7=\z@
15159 \lccode`\#=\z@
15160 \lccode``=\z@
15161 \lccode`\{=\z@
15162 \lccode`\}= \z@
15163 \lowercase{%
15164 \endgroup
15165 \def\HyPsd@SanitizeForOutFile#1{%
15166     \@onelevel@sanitize\Hy@tempa
15167     \escapechar`\\%
15168     \edef\Hy@tempa{%
15169         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15170     }%
15171     \edef\Hy@tempa{%
15172         \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15173     }%
15174 }%
15175 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15176     #1%
15177     \ifx\#2\\%
15178         \expandafter\ltx@gobble
15179     \else
15180         \expandafter\ltx@firstofone
15181     \fi
15182     {%
15183         \string\173%
15184         \HyPsd@SanitizeOut@BraceLeft#2\@nil
15185     }%
15186 }%
15187 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15188     #1%
15189     \ifx\#2\\%
15190         \expandafter\ltx@gobble
15191     \else
15192         \expandafter\ltx@firstofone
15193     \fi
15194     {%
15195         \string\175%
15196         \HyPsd@SanitizeOut@BraceRight#2\@nil

```

```

15197 }%
15198 }%
15199 }

```

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

```

15200 \newcommand{\currentpdfbookmark}{%
15201   \pdfbookmark[\Hy@currentbookmarklevel]%
15202 }
15203 \newcommand{\subpdfbookmark}{%
15204   \@tempcnta\Hy@currentbookmarklevel
15205   \Hy@StepCount\@tempcnta
15206   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15207 }
15208 \newcommand{\belowpdfbookmark}[2]{%
15209   \@tempcnta\Hy@currentbookmarklevel
15210   \Hy@StepCount\@tempcnta
15211   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15212   \advance\@tempcnta by -1 %
15213   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15214 }

```

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.

```

15215 \renewcommand\pdfbookmark[3][0]{%
15216   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15217   \hyper@anchorstart{#3.#1}\hyper@anchorend
15218 }
15219 \def\BOOKMARK{%
15220   \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15221 }
15222 \def\@BOOKMARK[#1]{%
15223   \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15224 }

```

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

49.1.1 Rerun warning

```
\Hy@OutlineRerunCheck
```

```

15225 \RequirePackage{rerunfilecheck}[2009/12/10]
15226 \def\Hy@OutlineRerunCheck{%
15227   \RerunFileCheck{\jobname.out}{%
15228     \immediate\closeout\@outlinefile
15229   }{%
15230     Rerun to get outlines right\MessageBreak
15231     or use package `bookmark'%
15232   }%
15233 }

```

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.

```

15234 <*\vtx>
15235 \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.

```

15236 \begingroup
15237 \catcode\`=12 %
15238 \ifnum\Hy@VTeXversion<650 %
15239 \catcode\`=12 %
15240 \gdef\hv@pdf@char#1#2#3{%
15241 \char
15242 \ifcase'#1#2#3 %
15243 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15244 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15245 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15246 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15247 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15248 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15249 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15250 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15251 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15252 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15253 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15254 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15255 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15256 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15257 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15258 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15259 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15260 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15261 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15262 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15263 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15264 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15265 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15266 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15267 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15268 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15269 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15270 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15271 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15272 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15273 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15274 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15275 \fi
15276 }%
15277 \else
15278 \gdef\hv@pdf@char{\char'}%
15279 \fi
15280 \endgroup

```

\@@BOOKMARK

```

15281 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15282 \expandafter\edef\csname @count@#3\endcsname{%
15283 \the\@serial@counter
15284 }%

```

```

15285 \edef\@mycount{\the\@serial@counter}%
15286 \Hy@StepCount\@serial@counter
15287 \edef\@parcount{%
15288   \expandafter\ifx\csname @count@#5\endcsname\relax
15289     0%
15290   \else
15291     \csname @count@#5\endcsname
15292   \fi
15293 }%
15294 \immediate\special{%
15295   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15296   s=\ifx#2-c\else o\fi,t=#4%
15297 }%
15298 }%

```

\ReadBookmarks

```

15299 \def\ReadBookmarks{%
15300   \begingroup
15301   \def\0{\hv@pdf@char 0}%
15302   \def\1{\hv@pdf@char 1}%
15303   \def\2{\hv@pdf@char 2}%
15304   \def\3{\hv@pdf@char 3}%
15305   \def\({}%
15306   \def\)}%
15307   \def\do##1{%
15308     \ifnum\catcode`##1=\active
15309       \@makeother##1%
15310     \else
15311       \ifnum\catcode`##1=6 %
15312         \@makeother##1%
15313       \fi
15314     \fi
15315   }%
15316   \dospecials
15317   \Hy@safe@activetrue
15318   \InputIfFileExists{\jobname.out}{\}{\}%
15319 \endgroup
15320 \ifx\WriteBookmarks\relax
15321 \else
15322   \if@files
15323     \newwrite\@outlinefile
15324     \Hy@OutlineRerunCheck
15325     \immediate\openout\@outlinefile=\jobname.out\relax
15326     \ifHy@typexml
15327       \immediate\write\@outlinefile{<relaxxml>\relax}%
15328     \fi
15329   \fi
15330 \fi
15331 }

15332 </vtex>
15333 <!*vtex>
15334 \def\ReadBookmarks{%
15335   \pdf@ifdraftmode{\}%
15336   \begingroup
15337   \def\do##1{%
15338     \ifnum\catcode`##1=\active

```

```

15339      \@makeother##1%
15340      \else
15341      \ifnum\catcode`##1=6 %
15342      \@makeother##1%
15343      \fi
15344      \fi
15345      }%
15346      \dospecials
15347      \Hy@safe@activetrue
15348      \escapechar=`\%
15349      \def\@BOOKMARK[##1][##2]##3##4##5{%
15350      \calc@bm@number{##5}%
15351      }%
15352      \InputIfFileExists{\jobname.out}{-}{-}%
15353      \ifx\WriteBookmarks\relax
15354      \global\let\WriteBookmarks\relax
15355      \fi
15356      \def\@BOOKMARK[##1][##2]##3##4##5{%
15357      \def\Hy@temp{##4}%
15358      (*pdfTeX)
15359      \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15360      \Hy@OutlineName{}\Hy@pstringName{%
15361      ##2\check@bm@number{##3}}%
15362      }{%
15363      \expandafter\strip@prefix\meaning\Hy@temp
15364      }%
15365      \pdfTeX)
15366      (*pdfmark)
15367      \pdfmark{%
15368      pdfmark=/OUT,%
15369      Count={##2\check@bm@number{##3}},%
15370      Dest={##3},%
15371      Title=\expandafter\strip@prefix\meaning\Hy@temp
15372      }%
15373      \pdfmark)
15374      (*dvipdfm|xetex)
15375      \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15376      \@pdfm@mark{%
15377      outline \ifHy@DvipdfmxOutlineOpen
15378      [%
15379      \ifnum##21>\z@
15380      \else
15381      -%
15382      \fi
15383      ] %
15384      \fi
15385      ##1<<%
15386      /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15387      /A<<%
15388      /S/GoTo%
15389      /D(\Hy@pstringName)%
15390      >>%
15391      >>%
15392      }%
15393      \dvipdfm|xetex)
15394      }%
15395      \begingroup

```

```

15396     \def\WriteBookmarks{0}%
15397     \InputIfFileExists{\jobname.out}{-}{-}%
15398     \endgroup
15399     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15400     \endgroup
15401 }%
15402 \ifx\WriteBookmarks\relax
15403 \else
15404     \if@files
15405         \newwrite\@outlinefile
15406         \Hy@OutlineRerunCheck
15407         \immediate\openout\@outlinefile=\jobname.out\relax
15408         \ifHy@typexml
15409             \immediate\write\@outlinefile{<relaxxml>\relax}%
15410         \fi
15411     \fi
15412 \fi
15413 }
15414 <*pdfTeX>
15415 \def\Hy@OutlineName#1#2#3#4{%
15416     \pdfoutline goto name{#2}count#3{#4}%
15417 }
15418 </pdfTeX>
15419 \def\check@bm@number#1{%
15420     \expandafter\ifx\csname B_#1\endcsname\relax
15421         0%
15422     \else
15423         \csname B_#1\endcsname
15424     \fi
15425 }
15426 \def\calc@bm@number#1{%
15427     \@tempcnta=\check@bm@number{#1}\relax
15428     \advance\@tempcnta by 1 %
15429     \expandafter\xdef\csname B_#1\endcsname{the\@tempcnta}%
15430 }
15431 </!vTeX>

15432 \ifHy@implicit
15433 \else
15434     \expandafter\endinput
15435 \fi

15436 </outlines>
15437 <*outlines | hypertex>

15438 \newlength\Hy@SectionHShift
15439 \def\Hy@SectionAnchorHref#1{%
15440     \ifx\protect\@typeset@protect
15441         \Hy@@@SectionAnchor{#1}%
15442     \fi
15443 }
15444 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15445     \leavevmode
15446     \hbox to 0pt{%
15447         \kern-\Hy@SectionHShift
15448         \Hy@raisedlink{%
15449             \hyper@anchorstart{#1}\hyper@anchorend
15450         }%
15451         \hss

```

```

15452 }%
15453 }
15454 \let\H@old@ssect\@ssect
15455 \def\@ssect#1#2#3#4#5{%
15456 \Hy@MakeCurrentHrefAuto{section*}%
15457 \setlength{\Hy@SectionHShift}{#1}%
15458 \begingroup
15459 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15460 \toks\tw@\expandafter{%
15461 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15462 #5%
15463 }%
15464 \edef\x{\endgroup
15465 \the\toks@\the\toks\tw@}%
15466 }\x
15467 }
15468 \let\H@old@schapter\@schapter
15469 \def\@schapter#1{%
15470 \begingroup
15471 \let\@mkboth\@gobbletwo
15472 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15473 \Hy@raisedlink{%
15474 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15475 }%
15476 \endgroup
15477 \H@old@schapter{#1}%
15478 }

```

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:

```

15479 \ltx@ifundefined{@chapter}{}{%
15480 \let\Hy@org@chapter\@chapter
15481 \def\@chapter{%
15482 \def\Hy@next{%
15483 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15484 \Hy@raisedlink{%
15485 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15486 }%
15487 }%
15488 \ifnum\c@secnumdepth>\m@ne
15489 \ltx@ifundefined{if@mainmatter}%
15490 \iftrue{\csname if@mainmatter\endcsname}%
15491 \let\Hy@next\relax
15492 \fi
15493 \fi
15494 \Hy@next
15495 \Hy@org@chapter
15496 }%
15497 }

15498 \let\H@old@part\@part
15499 \begingroup\expandafter\expandafter\expandafter\endgroup
15500 \expandafter\ifx\csname chapter\endcsname\relax
15501 \let\Hy@secnum@part\z@
15502 \else
15503 \let\Hy@secnum@part\m@ne
15504 \fi

```



```

15505 \def\@part{%
15506   \ifnum\Hy@secnum@part>\c@secnumdepth
15507     \phantomsection
15508   \fi
15509   \H@old@part
15510 }

15511 \let\H@old@spart\@spart
15512 \def\@spart#1{%
15513   \Hy@MakeCurrentHrefAuto{part*}%
15514   \Hy@raisedlink{%
15515     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15516   }%
15517   \H@old@spart{#1}%
15518 }

15519 \let\H@old@sect\@sect
15520 \def\@sect#1#2#3#4#5#6[#7]#8{%
15521   \ifnum #2>\c@secnumdepth
15522     \expandafter\@firstoftwo
15523   \else
15524     \expandafter\@secondoftwo
15525   \fi
15526   {%
15527     \Hy@MakeCurrentHrefAuto{section*}%
15528     \setlength{\Hy@SectionHShift}{#3}%
15529     \begingroup
15530     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15531     \toks\tw@\expandafter{%
15532       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15533       #8%
15534     }%
15535     \edef\x{\endgroup
15536       \the\toks@{\the\toks\tw@}}%
15537     }\x
15538   }{%
15539     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15540   }%
15541 }

15542 </outlines | hypertex>
15543 <*outlines>

15544 \expandafter\def\csname Parent-4\endcsname{}
15545 \expandafter\def\csname Parent-3\endcsname{}
15546 \expandafter\def\csname Parent-2\endcsname{}
15547 \expandafter\def\csname Parent-1\endcsname{}
15548 \expandafter\def\csname Parent0\endcsname{}
15549 \expandafter\def\csname Parent1\endcsname{}
15550 \expandafter\def\csname Parent2\endcsname{}
15551 \expandafter\def\csname Parent3\endcsname{}
15552 \expandafter\def\csname Parent4\endcsname{}

15553 </outlines>

```

50 Compatibility with koma-script classes

```
15554 <*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.

```

15555 \def\Hy@tempa{%
15556   \def\@addchap[##1]##2{%
15557     \typeout{##2}%
15558     \if@twoside
15559       \@mkboth{##1}{}%
15560     \else
15561       \@mkboth{}{##1}%
15562     \fi
15563     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15564     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15565     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15566     \Hy@raisedlink{%
15567       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15568     }%
15569     \if@twocolumn
15570       \@topnewpage[\@makeschapterhead{##2}]%
15571     \else
15572       \@makeschapterhead{##2}%
15573       \@afterheading
15574     \fi
15575     \addcontentsline{toc}{chapter}{##1}%
15576   }%
15577 }
15578 \@ifclassloaded{scrbook}{%
15579   \@ifclasslater{scrbook}{2001/01/01}{%
15580     \let\Hy@tempa\@empty
15581   }{}%
15582 }{%
15583   \@ifclassloaded{scrreprt}{%
15584     \@ifclasslater{scrreprt}{2001/01/01}{%
15585       \let\Hy@tempa\@empty
15586     }{}%
15587   }{%
15588     \let\Hy@tempa\@empty
15589   }%
15590 }%
15591 \Hy@tempa
15592 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15593 <*pd1enc>
15594 \DeclareFontEncoding{PD1}{}{}

Accents
15595 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15596 \DeclareTextAccent{\'}{PD1}{\textacute}
15597 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15598 \DeclareTextAccent{\~}{PD1}{\texttilde}
15599 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}

```

```

15600 \DeclareTextAccent{\r}{PD1}{\textring}
15601 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15602 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15603 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15604 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15605 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15606 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15607 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15608 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15609 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15610 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15611 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15612 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15613 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15614 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15615 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15616 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15617 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15618 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15619 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15620 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15621 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15622 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15623 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15624 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15625 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15626 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15627 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15628 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15629 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15630 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15631 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15632 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15633 \DeclareTextCommand{\newtie}{PD1}[1]{%
15634 \TextSymbolUnavailable{\newtie{#1}}#1%
15635 }

```

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

```

15636 % U+0009 (CHARACTER TABULATION)
15637 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15638 % U+000A (LINE FEED)
15639 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15640 % U+000D (CARRIAGE RETURN)
15641 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15642 % U+02D8 BREVE; breve
15643 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15644 % U+02C7 CARON; caron
15645 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15646 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15647 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15648 % U+02D9 DOT ABOVE; dotaccent
15649 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15650 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15651 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15652 % U+02DB OGONEK; ogonek
15653 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

```

15654 % U+02DA RING ABOVE; ring
 15655 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15656 % U+02DC SMALL TILDE; ilde, *tilde
 15657 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15658 % U+0022 QUOTATION MARK; quotedbl
 15659 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15660 % U+0023 NUMBER SIGN; numbersign
 15661 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15662 % U+0024 DOLLAR SIGN; dollar
 15663 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15664 % U+0025 PERCENT SIGN; percent
 15665 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15666 % U+0026 AMPERSAND; ampersand
 15667 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15668 % U+0028 LEFT PARENTHESIS; parenleft
 15669 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 15670 % U+0029 RIGHT PARENTHESIS; parenright
 15671 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 15672 % U+002E FULL STOP; period
 15673 \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
 15674 % U+003C LESS-THAN SIGN; less
 15675 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15676 % U+003E GREATER-THAN SIGN; greater
 15677 \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
 15678 % U+005C REVERSE SOLIDUS; backslash
 15679 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15680 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15681 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15682 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15683 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15684 % U+005F LOW LINE; underscore

15685 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15686 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15687 % U+0060 GRAVE ACCENT; grave
15688 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
15689 % U+0069 LATIN SMALL LETTER I; i
15690 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
15691 % U+007B LEFT CURLY BRACKET; braceleft
15692 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
15693 % U+007C VERTICAL LINE; *bar, verticalbar
15694 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
15695 % U+007D RIGHT CURLY BRACKET; braceright
15696 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15697 % U+007E TILDE; asciitilde
15698 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
15699 % U+2022 BULLET; bullet
15700 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
15701 % U+2020 DAGGER; dagger
15702 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
15703 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
15704 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
15705 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
15706 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15707 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
15708 % U+2014 EM DASH; emdash
15709 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
15710 % U+2013 EN DASH; endash
15711 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
15712 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15713 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
15714 % U+2044 FRACTION SLASH; fraction
15715 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
15716 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
15717 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
15718 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
inglright
15719 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
15720 % U+2212 MINUS SIGN; minus
15721 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
15722 % U+2030 PER MILLE SIGN; perthousand
15723 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15724 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15725 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15726 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15727 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15728 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15729 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15730 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15731 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

15732 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15733 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15734 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15735 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15736 % U+2122 TRADE MARK SIGN; trademark
 15737 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15738 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15739 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15740 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15741 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15742 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15743 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15744 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15745 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15746 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15747 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15748 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15749 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15750 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15751 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15752 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15753 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15754 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15755 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15756 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15757 % U+0153 LATIN SMALL LIGATURE OE; oe
 15758 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15759 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15760 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15761 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15762 \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.
 15763 % U+20AC EURO SIGN; *Euro, euro
 15764 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15765 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15766 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15767 % U+00A2 CENT SIGN; cent
 15768 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15769 % U+00A3 POUND SIGN; sterling
 15770 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15771 % U+00A4 CURRENCY SIGN; currency
 15772 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15773 % U+00A5 YEN SIGN; yen
 15774 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15775 % U+00A6 BROKEN BAR; brokenbar
 15776 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15777 % U+00A7 SECTION SIGN; section
 15778 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15779 % U+00A8 DIAERESIS; dieresis
 15780 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15781 % U+00A9 COPYRIGHT SIGN; copyright
 15782 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15783 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15784 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15785 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft

15786 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15787 % U+00AC NOT SIGN; logicalnot
15788 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15789 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
15790 % U+00AE REGISTERED SIGN; registered
15791 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15792 % U+00AF MACRON; *macron, overscore
15793 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15794 % U+00B0 DEGREE SIGN; degree
15795 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15796 % U+00B1 PLUS-MINUS SIGN; plusminus
15797 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15798 % U+00B2 SUPERSCRIPT TWO; twosuperior
15799 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15800 % U+00B3 SUPERSCRIPT THREE; threesuperior
15801 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15802 % U+00B4 ACUTE ACCENT; acute
15803 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15804 % U+00B5 MICRO SIGN; mu, mul
15805 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15806 % U+00B6 PILCROW SIGN; paragraph
15807 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15808 % U+00B7 MIDDLE DOT; middot, *periodcentered
15809 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15810 % U+00B8 CEDILLA; cedilla
15811 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15812 % U+00B9 SUPERSCRIPT ONE; onesuperior
15813 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15814 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15815 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15816 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15817 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15818 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15819 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15820 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15821 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15822 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15823 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15824 % U+00BF INVERTED QUESTION MARK; questiondown
15825 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15826 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15827 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15828 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15829 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15830 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15831 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15832 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15833 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15834 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15835 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15836 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15837 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15838 % U+00C6 LATIN CAPITAL LETTER AE; AE
15839 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15840 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

15841 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15842 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15843 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15844 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15845 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15846 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15847 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15848 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15849 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15850 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15851 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15852 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15853 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15854 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15855 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15856 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15857 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15858 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15859 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15860 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15861 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15862 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15863 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15864 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15865 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15866 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15867 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15868 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15869 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15870 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15871 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15872 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15873 % U+00D7 MULTIPLICATION SIGN; multiply
15874 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15875 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15876 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15877 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15878 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15879 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15880 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15881 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15882 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15883 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15884 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15885 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15886 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15887 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15888 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15889 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15890 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15891 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15892 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15893 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15894 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15895 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15896 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15897 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2

15898 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15899 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15900 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15901 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15902 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15903 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15904 % U+00E6 LATIN SMALL LETTER AE; ae
15905 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15906 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15907 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15908 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15909 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15910 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15911 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15912 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15913 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15914 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15915 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15916 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15917 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15918 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15919 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15920 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15921 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15922 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15923 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15924 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15925 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15926 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15927 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15928 % U+00F0 LATIN SMALL LETTER ETH; eth
15929 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15930 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15931 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15932 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15933 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15934 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15935 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15936 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15937 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15938 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15939 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15940 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15941 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15942 % U+00F7 DIVISION SIGN; divide
15943 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15944 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15945 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15946 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15947 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15948 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15949 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15950 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15951 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15952 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15953 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15954 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute

```

15955 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15956 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15957 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15958 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15959 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15960 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15961 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15962 \DeclareTextCommand{\SS}{PD1}{SS}%
15963 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15964 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15965 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15966 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15967 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15968 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15969 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15970 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15971 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15972 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15973 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15974 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15975 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15976 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15977 \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).

```

15978 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15979 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15980 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15981 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15982 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15983 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15984 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15985 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15986 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15987 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15988 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15989 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15990 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15991 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15992 </pd1enc>

```

51.2 PU encoding

```

15993 (*puenc)
15994 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15995 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15996 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15997 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15998 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15999 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb

```

16000 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
16001 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
16002 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
16003 % U+0304 COMBINING MACRON; macroncmb
16004 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
16005 % U+0306 COMBINING BREVE; brevecmb
16006 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
16007 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
16008 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
16009 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
16010 % U+0308 COMBINING DIAERESIS; dieresiscmb
16011 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
16012 % U+030A COMBINING RING ABOVE; ringcmb
16013 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
16014 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
16015 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
16016 % U+030C COMBINING CARON; caroncmb
16017 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
16018 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
16019 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
16020 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
16021 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16022 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
16023 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
16024 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16025 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
16026 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
16027 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
16028 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
16029 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
16030 % U+0327 COMBINING CEDILLA; cedillacmb
16031 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
16032 % U+0328 COMBINING OGONEK; ogonekcmb
16033 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
16034 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
16035 % \textsubcircum (tipa)
16036 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
16037 % U+032E COMBINING BREVE BELOW; brevebelowcmb
16038 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
16039 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
16040 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
16041 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16042 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
16043 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
16044 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
16045 % U+20DD COMBINING ENCLOSING CIRCLE
16046 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16047 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
16048 \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.
16049 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
16050 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
16051 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%

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16052 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
16053 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
16054 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
16055 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
16056 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
16057 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16058 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16059 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16060 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
16061 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16062 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16063 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16064 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16065 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
16066 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
16067 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16068 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
16069 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16070 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16071 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16072 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16073 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16074 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16075 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16076 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16077 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16078 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16079 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16080 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16081 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16082 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16083 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16084 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16085 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16086 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16087 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16088 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16089 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16090 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16091 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16092 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16093 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
low}%
16094 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16095 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16096 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16097 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16098 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16099 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16100 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16101 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16102 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
16103 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16104 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16105 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16106 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%

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16107 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16108 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16109 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16110 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16111 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16112 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16113 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16114 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16115 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16116 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16117 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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

Special white space escape characters.

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16118 % U+0009 (CHARACTER TABULATION)
16119 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16120 % U+000A (LINE FEED)
16121 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16122 % U+000D (CARRIAGE RETURN)
16123 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16124 % U+0022 QUOTATION MARK; quotedbl
16125 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16126 % U+0023 NUMBER SIGN; numbersign
16127 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16128 % U+0024 DOLLAR SIGN; dollar
16129 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16130 %* \textdollar -> \mathdollar
16131 %* \textdollar -> \EyesDollar (marvosym)
16132 % U+0025 PERCENT SIGN; percent
16133 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16134 % U+0026 AMPERSAND; ampersand
16135 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16136 %* \textampersand -> \binampersand (stmaryrd)
16137 %* \textampersand -> \with (cmll)
16138 % U+0027 APOSTROPHE; quotesingle
16139 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16140 % U+0028 LEFT PARENTHESIS; parenleft
16141 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16142 % U+0029 RIGHT PARENTHESIS; parenright
16143 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16144 % U+002A ASTERISK; asterisk; (?)
16145 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16146 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16147 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16148 % U+002C COMMA; comma; \MVComma (marvosym)
16149 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16150 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16151 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16152 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16153 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16154 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16155 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16156 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16157 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16158 % U+0031 DIGIT ONE; one; \MVOne (marvosym)

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16159 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 16160 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 16161 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 16162 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 16163 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 16164 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 16165 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
 16166 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 16167 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
 16168 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 16169 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 16170 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 16171 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 16172 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 16173 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 16174 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 16175 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 16176 % U+003C LESS-THAN SIGN; less
 16177 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 16178 % U+003E GREATER-THAN SIGN; greater
 16179 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 16180 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 16181 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 16182 % U+005C REVERSE SOLIDUS; backslash
 16183 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 16184 % U+005E CIRCUMFLEX ACCENT; asciicircum
 16185 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 16186 % U+005F LOW LINE; underscore
 16187 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 16188 %* \textunderscore -> \mathunderscore (LaTeX)
 16189 % U+0060 GRAVE ACCENT; grave
 16190 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 16191 % U+0069 LATIN SMALL LETTER I; i
 16192 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
 16193 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 16194 % U+007B LEFT CURLY BRACKET; braceleft
 16195 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B

16196 % U+007C VERTICAL LINE; *bar, verticalbar
 16197 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 16198 %* \textbar -> \textverline (tipa)
 16199 % U+007D RIGHT CURLY BRACKET; braceright
 16200 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 16201 % U+007E TILDE; asciitilde
 16202 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 16203 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16204 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 16205 % U+00A2 CENT SIGN; cent
 16206 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 16207 % U+00A3 POUND SIGN; sterling
 16208 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 16209 %* \textsterling -> \mathsterling (LaTeX)
 16210 %* \textsterling -> \pounds (LaTeX)
 16211 % U+00A4 CURRENCY SIGN; currency
 16212 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 16213 % U+00A5 YEN SIGN; yen
 16214 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 16215 % U+00A6 BROKEN BAR; brokenbar
 16216 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 16217 %* \textbrokenbar -> \brokenvert (wasysym)
 16218 % U+00A7 SECTION SIGN; section
 16219 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 16220 %* \textsection -> \mathsection (LaTeX)
 16221 %* \textsection -> \S (LaTeX)
 16222 % U+00A8 DIAERESIS; dieresis
 16223 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 16224 % U+00A9 COPYRIGHT SIGN; copyright
 16225 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 16226 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16227 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 16228 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16229 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 16230 % U+00AC NOT SIGN; logicalnot
 16231 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 16232 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16233 % U+00AE REGISTERED SIGN; registered
 16234 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 16235 % U+00AF MACRON; *macron, overscore
 16236 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 16237 % U+00B0 DEGREE SIGN; degree
 16238 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 16239 % U+00B1 PLUS-MINUS SIGN; plusminus
 16240 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 16241 % U+00B2 SUPERSCRIPT TWO; twosuperior
 16242 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 16243 % U+00B3 SUPERSCRIPT THREE; threesuperior
 16244 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 16245 % U+00B4 ACUTE ACCENT; acute
 16246 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4

16247 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
 16248 % U+00B5 MICRO SIGN; mu, mul
 16249 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 16250 % U+00B6 PILCROW SIGN; paragraph
 16251 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 16252 %* \textparagraph -> \mathparagraph (LaTeX)
 16253 % U+00B7 MIDDLE DOT; middot, *periodcentered
 16254 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 16255 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 16256 %* \textperiodcentered -> \Squaredot (marvosym)
 16257 % U+00B8 CEDILLA; cedilla
 16258 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 16259 % U+00B9 SUPERSCRIPT ONE; onesuperior
 16260 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 16261 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 16262 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 16263 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 16264 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 16265 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 16266 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 16267 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 16268 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 16269 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 16270 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 16271 % U+00BF INVERTED QUESTION MARK; questiondown
 16272 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 16273 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 16274 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 16275 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 16276 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 16277 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 16278 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 16279 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 16280 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 16281 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 16282 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 16283 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 16284 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 16285 % U+00C6 LATIN CAPITAL LETTER AE; AE
 16286 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 16287 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 16288 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 16289 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 16290 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 16291 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 16292 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 16293 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 16294 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 16295 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 16296 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 16297 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 16298 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 16299 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 16300 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 16301 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 16302 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

16303 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16304 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
16305 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16306 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16307 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16308 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16309 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16310 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16311 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16312 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16313 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16314 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
16315 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16316 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16317 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16318 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
16319 % U+00D7 MULTIPLICATION SIGN; multiply
16320 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16321 %* \textmultiply -> \vartimes (stmaryrd)
16322 %* \textmultiply -> \MVMultiplication (marvosym)
16323 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16324 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16325 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16326 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16327 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16328 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16329 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16330 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16331 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16332 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
16333 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16334 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16335 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16336 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16337 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16338 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16339 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16340 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16341 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
16342 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16343 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16344 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16345 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16346 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16347 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16348 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16349 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
16350 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16351 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16352 % U+00E6 LATIN SMALL LETTER AE; ae
16353 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16354 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16355 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16356 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16357 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
16358 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16359 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9

16360 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
 16361 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
 16362 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
 16363 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
 16364 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
 16365 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 16366 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 16367 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 16368 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 16369 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 16370 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 16371 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 16372 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 16373 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 16374 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 16375 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 16376 % U+00F0 LATIN SMALL LETTER ETH; eth
 16377 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 16378 %* \dh -> \eth (wsuipa, phonetic)
 16379 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 16380 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 16381 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 16382 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 16383 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16384 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 16385 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16386 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 16387 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16388 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 16389 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16390 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16391 % U+00F7 DIVISION SIGN; divide
 16392 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16393 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16394 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16395 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16396 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16397 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16398 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16399 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16400 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16401 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16402 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16403 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16404 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16405 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16406 % \th, \thorn (wasysym), \textthorn (tipa)
 16407 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16408 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16409 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16410 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16411 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16412 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16413 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron

16414 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16415 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16416 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16417 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16418 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16419 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16420 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16421 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16422 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16423 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16424 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16425 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16426 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16427 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16428 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16429 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16430 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16431 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16432 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16433 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16434 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16435 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16436 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16437 % U+010D LATIN SMALL LETTER C WITH CARON; caron
16438 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16439 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16440 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16441 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16442 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16443 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16444 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16445 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16446 % \textcrd (tipa)
16447 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16448 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16449 %* \textcrd -> \crossd (wsuipa)
16450 % An alternate glyph with the stroke through the bowl:
16451 %* \textcrd -> \textbard (tipa)
16452 %* \textcrd -> \bard (wsuipa)
16453 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16454 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16455 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16456 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16457 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16458 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16459 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16460 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16461 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16462 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16463 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16464 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16465 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16466 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16467 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16468 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16469 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron

16470 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16471 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16472 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16473 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16474 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16475 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16476 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16477 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16478 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16479 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16480 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16481 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16482 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16483 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16484 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16485 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16486 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16487 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16488 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16489 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16490 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16491 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16492 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16493 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16494 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16495 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16496 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16497 %* \texthbar -> \textcrh (tipa)
16498 %* \texthbar -> \crossh (wsuipa)
16499 %* \texthbar -> \planck (phonetic)
16500 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16501 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16502 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16503 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16504 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16505 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16506 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16507 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16508 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16509 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16510 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16511 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16512 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16513 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16514 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16515 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16516 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16517 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16518 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16519 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16520 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16521 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16522 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16523 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16524 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ

```

16525 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16526 % U+0133 LATIN SMALL LIGATURE IJ; ij
16527 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16528 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16529 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16530 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16531 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16532 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16533 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16534 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16535 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16536 \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`.

```

16537 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16538 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16539 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16540 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16541 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16542 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16543 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16544 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16545 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16546 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16547 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16548 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16549 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16550 \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`.

```

16551 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16552 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16553 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16554 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16555 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16556 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16557 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16558 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16559 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16560 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16561 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16562 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16563 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
16564 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16565 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16566 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16567 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16568 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16569 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16570 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

```

16571 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 16572 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16573 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16574 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16575 % U+014B LATIN SMALL LETTER ENG; eng
 16576 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16577 %* \ng -> \eng (wsuipa)
 16578 %* \ng -> \engma (phonetic)
 16579 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16580 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16581 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16582 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16583 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16584 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16585 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16586 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16587 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 16588 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16589 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 16590 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16591 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16592 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16593 % U+0153 LATIN SMALL LIGATURE OE; oe
 16594 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16595 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16596 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16597 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16598 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16599 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 16600 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16601 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16602 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16603 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16604 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16605 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16606 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16607 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16608 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16609 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16610 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16611 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16612 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16613 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16614 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16615 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16616 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16617 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16618 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16619 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16620 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16621 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16622 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16623 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-

cent

16624 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16625 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16626 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16627 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16628 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16629 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16630 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16631 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16632 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16633 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16634 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16635 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16636 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16637 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16638 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16639 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16640 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16641 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16642 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16643 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16644 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16645 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16646 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16647 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16648 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16649 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16650 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16651 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16652 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16653 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16654 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16655 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16656 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16657 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16658 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16659 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16660 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16661 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16662 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16663 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16664 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16665 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16666 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16667 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16668 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16669 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16670 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16671 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16672 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16673 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16674 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16675 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16676 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16677 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron

16678 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16679 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16680 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16681 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16682 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16683 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16684 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16685 %* \textcrb -> \crossb (wsuipa)
 16686 % An alternate glyph with the stroke through the bowl:
 16687 %* \textcrb -> \textbarb (tipa)
 16688 %* \textcrb -> \barb (wsuipa)
 16689 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16690 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
 16691 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16692 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16693 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
 16694 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
 16695 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16696 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 16697 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 16698 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 16699 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 16700 %* \textflorin -> \Florin (marvosym)
 16701 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 16702 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 16703 %* \texthvlig -> \hv (wsuipa)
 16704 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
 16705 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
 16706 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 16707 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 16708 %* \texthtk -> \hausak (phonetic)
 16709 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 16710 % \textbarl (tipa), \barl (wsuipa)
 16711 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 16712 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 16713 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 16714 % \textcrlambda (tipa)
 16715 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 16716 %* \textcrlambda -> \crossnilambda (wsuipa)
 16717 %* \textcrlambda -> \barlambda (phonetic)
 16718 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 16719 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
 16720 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
 16721 % \textnrleg (tipx)
 16722 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 16723 %* \textPUnrleg -> \textnrleg (tipx)
 16724 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 16725 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 16726 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
 16727 % \textlhookt (tipa)
 16728 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

16729 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16730 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16731 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16732 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16733 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16734 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16735 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16736 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16737 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16738 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16739 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16740 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16741 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16742 % \textpipe (tipa)
16743 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16744 %* \textpipe -> \textpipevar (tipx)
16745 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16746 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16747 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16748 %* \textdoublepipe -> \textdoublepipevar (tipx)
16749 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16750 % clickalveolar; \textdoublebarpipe (tipa)
16751 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16752 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16753 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16754 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16755 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16756 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16757 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16758 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16759 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16760 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16761 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16762 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16763 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16764 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16765 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16766 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16767 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16768 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16769 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16770 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16771 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16772 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16773 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16774 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16775 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16776 %* \textgslash -> \textcrg (tipa)
16777 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16778 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16779 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16780 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16781 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16782 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16783 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron

16784 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16785 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16786 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16787 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16788 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16789 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16790 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16791 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16792 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16793 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16794 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16795 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16796 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16797 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16798 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16799 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16800 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16801 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16802 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16803 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16804 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16805 % *Oslashacute, Ostrokeacut
16806 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16807 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16808 % *oslashacute, ostrokeacut
16809 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16810 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16811 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16812 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16813 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16814 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16815 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16816 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16817 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16818 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
16819 % edbreve
16819 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16820 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
16821 % breve
16821 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16822 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16823 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16824 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16825 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16826 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16827 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
16828 % breve
16828 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16829 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
16830 % breve
16830 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16831 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16832 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16833 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16834 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16835 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16836 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-

edbreve

16837 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
 16838 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
 breve

16839 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
 16840 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 16841 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 16842 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 16843 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16844 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16845 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16846 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16847 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16848 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve

16849 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16850 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve

16851 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16852 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16853 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16854 % U+021F LATIN SMALL LETTER H WITH CARON
 16855 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16856 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16857 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16858 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16859 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16860 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16861 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16862 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16863 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16864 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16865 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16866 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16867 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16868 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16869 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16870 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16871 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16872 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16873 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16874 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16875 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16876 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16877 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16878 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16879 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16880 % U+0237 LATIN SMALL LETTER DOTLESS J
 16881 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16882 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16883 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16884 %* \textPUdblig -> \textdblig (tipx)
 16885 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16886 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16887 %* \textPUqplig -> \textqplig (tipx)
 16888 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16889 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C

16890 %* \textslashc -> \textcentoldstyle (textcomp)
 16891 % With bar instead of stroke:
 16892 %* \textslashc -> \textbarc (tipa)

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

16893 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16894 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16895 %* \textturna -> \inva (wasysym)
 16896 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16897 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16898 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16899 %* \textscripta -> \vara (phonetic)
 16900 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16901 % \textturnscripta (tipa)
 16902 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16903 %* \textturnscripta -> \invscripta (wsuipa)
 16904 %* \textturnscripta -> \rotvara (phonetic)
 16905 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16906 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16907 %* \texthtb -> \hookb (wsuipa)
 16908 %* \texthtb -> \hausab (phonetic)
 16909 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16910 % \textopeno (tipa), \openo (wasysym)
 16911 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16912 %* \textopeno -> \varopeno (phonetic)
 16913 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16914 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16915 %* \textctc -> \curlyc (wsuipa)
 16916 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16917 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16918 %* \textrtaild -> \taild (wsuipa)
 16919 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16920 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16921 %* \texthtd -> \hookd (wsuipa)
 16922 %* \texthtd -> \hausad (phonetic)
 16923 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16924 % \textreve (tipa), \reve (wsuipa)
 16925 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16926 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16927 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16928 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16929 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16930 % \textrhookschwa (tipa)
 16931 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16932 %* \textrhookschwa -> \er (wsuipa)
 16933 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 16934 % SILON; eopen;
 16935 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16936 %* \textniepsilon -> \epsi (phonetic)
 16937 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16938 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16939 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16940 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 16941 % reversedhook;
 16942 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D

16943 %* \textrhookreversepsilon -> \hookreversepsilon (wsuipa)
 16944 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16945 % \textclosereversepsilon (tipa)
 16946 \DeclareTextCommand{\textclosereversepsilon}{PU}{\82\136}% U+025E
 16947 %* \textclosereversepsilon -> \closedreversepsilon (wsuipa)
 16948 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16949 % \textbardotlessj (tipa)
 16950 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16951 %* \textbardotlessj -> \barj (phonetic)
 16952 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16953 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16954 %* \texthtg -> \hookg (wsuipa)
 16955 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16956 % \textscriptg (tipa), \scriptg (wsuipa)
 16957 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16958 %* \textscriptg -> \varg (phonetic)
 16959 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16960 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16961 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16962 % \ipagamma (wsuipa), \vod (phonetic)
 16963 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16964 %* \textipagamma -> \vod (pnonetic)
 16965 % U+0264 LATIN LETTER RAMS HORN; ramshorn;
 16966 % \babygamma (wsuipa)
 16967 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16968 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16969 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16970 %* \textturnh -> \invh (wsuipa)
 16971 %* \textturnh -> \udesc (phonetic)
 16972 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16973 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16974 %* \texthth -> \hookh (wsuipa)
 16975 %* \texthth -> \voicedh (phonetic)
 16976 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16977 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16978 %* \texththeng -> \hookheng (wsuipa)
 16979 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16980 % \textbari (tipa), \bari (wsuipa)
 16981 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16982 %* \textbari -> \ibar (phonetic)
 16983 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16984 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16985 %* \textniiota -> \vari (phonetic)
 16986 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16987 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16988 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16989 % \textltilde (tipa)
 16990 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16991 %* \textltilde -> \tildel (wsuipa)
 16992 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16993 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16994 %* \textbeltl -> \latfrc (wsuipa)
 16995 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16996 % \lhookretroflex; \textrtail (tipa)

16997 \DeclareTextCommand{\textrtail}{PU}{\82\155}% U+026D
16998 %* \textrtail -> \tail (wsuipa)
16999 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
17000 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
17001 %* \textlyoghlig -> \lz (wsuipa)
17002 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
17003 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
17004 %* \textturnm -> \invm (wsuipa)
17005 %* \textturnm -> \rotrm (phonetic)
17006 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
17007 % \textturnmrleg (tipa)
17008 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
17009 %* \textturnmrleg -> \legm (wsuipa)
17010 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
17011 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
17012 %* \textltailm -> \labdentalnas (wsuipa)
17013 %* \textltailm -> \emgma (phonetic)
17014 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
17015 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
17016 %* \textltailn -> \nj (wsuipa)
17017 %* \textltailn -> \enya (phonetic)
17018 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
17019 % nhookretroflex; \textrtailn (tipa)
17020 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17021 %* \textrtailn -> \tailn (wsuipa)
17022 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17023 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
17024 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17025 % LATIN CAPITAL LETTER BARRED O; obarred;
17026 % \textbaro (tipa), \baro (wsuipa)
17027 % But \baro from stmaryrd is different!
17028 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17029 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscœlig (tipa)
17030 \DeclareTextCommand{\textscœlig}{PU}{\82\166}% U+0276
17031 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
17032 % \textcloseomega (tipa)
17033 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17034 %* \textcloseomega -> \closedniomega (wsuipa)
17035 %* \textcloseomega -> \varomega (phonetic)
17036 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
17037 \DeclareTextCommand{\textniph}{PU}{\82\170}% U+0278
17038 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17039 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17040 %* \textturnr -> \invr (wsuipa)
17041 %* \textturnr -> \rotr (phonetic)
17042 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17043 % rlonglegturned; \textturnlongleg (tipa)
17044 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17045 %* \textturnlongleg -> \invleg (wsuipa)
17046 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
17047 % \textturnrrtail (tipa)
17048 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17049 %* \textturnrrtail -> \tailinvr (wsuipa)
17050 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)

17051 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17052 %* \textlonglegr -> \legr (wsuipa)
17053 % U+027D LATIN SMALL LETTER R WITH TAIL; rho; \textrtailr (tipa)
17054 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17055 %* \textrtailr -> \tailr (wsuipa)
17056 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17057 % \textfishhookr (tipa)
17058 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17059 %* \textfishhookr -> \flapr (wsuipa)
17060 %* \textfishhookr -> \flap (phonetic)
17061 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17062 % \textlhtlongi (tipa)
17063 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17064 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17065 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17066 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17067 % \textinvscr (tipa), \invscr (wsuipa)
17068 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17069 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17070 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17071 %* \textrtails -> \tails (wsuipa)
17072 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17073 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17074 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17075 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17076 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17077 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
17078 % \textvibyi (tipa)
17079 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17080 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17081 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17082 %* \textctesh -> \curlyesh (wsuipa)
17083 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17084 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17085 %* \textturnt -> \clickt (wsuipa)
17086 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
17087 % \textrtailt (tipa)
17088 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17089 %* \textrtailt -> \tailt (wsuipa)
17090 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17091 % \textbaru (tipa), \baru (wsuipa)
17092 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17093 %* \textbaru -> \ubar (phonetic)
17094 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17095 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17096 %* \textniupsilon -> \rotOmega (phonetic)
17097 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17098 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17099 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17100 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17101 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17102 %* \textturnv -> \invv (wsuipa)
17103 %* \textturnv -> \pwedge (phonetic)

17104 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17105 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17106 %* \textturnw -> \invw (wsuipa)
17107 %* \textturnw -> \rotw (phonetic)
17108 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17109 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17110 %* \textturny -> \invy (wsuipa)
17111 %* \textturny -> \roty (phonetic)
17112 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17113 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17114 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
17115 % \textrtailz (tipa)
17116 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17117 %* \textrtailz -> \tailz (wsuipa)
17118 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17119 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17120 %* \textctz -> \curlyz (wsuipa)
17121 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17122 % \textyogh (tipa), \yogh (wsuipa)
17123 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17124 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17125 % ezhcurl; \textctyogh (tipa)
17126 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17127 %* \textctyogh -> \curlyyogh (wsuipa)
17128 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17129 % \textglotstop (tipa), \glotstop (wsuipa)
17130 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17131 %* \textglotstop -> \ejective (wsuipa)
17132 %* \textglotstop -> \glottal (phonetic)
17133 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17134 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17135 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17136 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17137 %* \textrevglotstop -> \rereject (wsuipa)
17138 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17139 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17140 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17141 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17142 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17143 %* \textstretchc -> \clickc (wsuipa)
17144 %* \textstretchc -> \textstretchcvar (tipx)
17145 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17146 % \textbullseye (tipa)
17147 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17148 %* \textbullseye -> \clickb (wsuipa)
17149 %* \textbullseye -> \textObullseye (tipx)
17150 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17151 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17152 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17153 % \textcloseepsilon (tipa)
17154 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17155 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17156 % \texthtscg (tipa)
17157 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17158 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)

17159 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17160 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
tail; \textcdj (tipa)
17161 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17162 %* \textctj -> \textctjvar (tipx)
17163 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17164 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17165 %* \textturnk -> \textturnsck (tipx)
17166 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17167 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17168 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
17169 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17170 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
17171 % \textbarglotstop (tipa)
17172 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17173 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17174 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
17175 % \textbarrevglotstop (tipa)
17176 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
17177 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
17178 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
17179 %* \textdzlig -> \dz (wsupipa)
17180 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
17181 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
17182 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
17183 % \textdctzlig (tipa)
17184 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
17185 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
17186 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
17187 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
17188 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
17189 %* \textteshlig -> \tesh (wsuipa)
17190 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
17191 % \texttctclig (tipa)
17192 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
17193 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
17194 % \textlhtlongy (tipa)
17195 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
17196 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
17197 % \textvibyy (tipa)
17198 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

17199 % U+02BD MODIFIER LETTER REVERSED COMMA;
17200 % commareversedmod, afi64937; \textrevapostrophe (tipa)
17201 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
17202 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
17203 % \textraiseglotstop (tipa)
17204 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
17205 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
17206 % \textlptr (tipa)
17207 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
17208 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
17209 % \textrptr (tipa)

17210 \DeclareTextCommand{\texttrptr}{PU}{\82\303}% U+02C3
 17211 % U+02C7 CARON; caron
 17212 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17213 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17214 % \textprimstress (tipa)
 17215 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17216 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17217 % \textsecstress (tipa)
 17218 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17219 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17220 % \textlengthmark (tipa)
 17221 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17222 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17223 % \texthalflength (tipa)
 17224 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17225 % U+02D8 BREVE; breve
 17226 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17227 % U+02D9 DOT ABOVE; dotaccent
 17228 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17229 % U+02DA RING ABOVE; ring
 17230 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17231 % U+02DB OGONEK; ogonek
 17232 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17233 % U+02DC SMALL TILDE; ilde, *tilde
 17234 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17235 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17236 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17237 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17238 % U+02F3 MODIFIER LETTER LOW RING
 17239 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17240 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17241 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17242 % U+02F7 MODIFIER LETTER LOW TILDE
 17243 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17244 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17245 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17246 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17247 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

17248 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17249 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17250 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17251 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17252 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 17253 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17254 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17255 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17256 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 17257 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

17258 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17259 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17260 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek

17261 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
17262 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
17263 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
17264 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
17265 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
17266 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
17267 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
17268 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
17269 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
17270 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
17271 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17272 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
17273 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17274 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17275 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17276 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17277 % iotadieresis
17278 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
17279 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17280 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17281 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17282 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17283 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17284 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17285 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
17286 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17287 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17288 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17289 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17290 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17291 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17292 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17293 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17294 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17295 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17296 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17297 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17298 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17299 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17300 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17301 % U+039C GREEK CAPITAL LETTER MU; Mu
17302 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17303 % U+039D GREEK CAPITAL LETTER NU; Nu
17304 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17305 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17306 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17307 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17308 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17309 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17310 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17311 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17312 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17313 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17314 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17315 % U+03A4 GREEK CAPITAL LETTER TAU; Tau

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17316 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17317 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon (LaTeX)
17318 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17319 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17320 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17321 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17322 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17323 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17324 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17325 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17326 % \Omega (LaTeX)
17327 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17328 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17329 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17330 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17331 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
17332 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17333 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17334 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17335 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17336 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17337 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17338 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17339 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17340 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17341 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17342 % AND TONOS; upsilondieresis
17343 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17344 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17345 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17346 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17347 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17348 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17349 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17350 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17351 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17352 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17353 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17354 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17355 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17356 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17357 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17358 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17359 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17360 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17361 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17362 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17363 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17364 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17365 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17366 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17367 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17368 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17369 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17370 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17371 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE

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17372 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17373 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17374 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17375 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17376 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17377 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17378 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17379 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17380 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17381 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17382 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17383 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17384 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17385 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17386 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17387 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17388 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17389 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17390 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17391 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17392 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17393 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17394 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17395 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17396 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
17397 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17398 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17399 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17400 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17401 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17402 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17403 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17404 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17405 % U+03DA GREEK LETTER STIGMA; Stigmatreek
17406 \DeclareTextCommand{\textStigmatreek}{PU}{\83\332}% U+03DA
17407 % U+03DB GREEK SMALL LETTER STIGMA
17408 \DeclareTextCommand{\textstigmatreek}{PU}{\83\333}% U+03DB
17409 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17410 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17411 % U+03DD GREEK SMALL LETTER DIGAMMA
17412 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17413 %* \textdigammagreek -> \digamma (AmS)
17414 % U+03DE GREEK LETTER KOPPA; Koppagreek
17415 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17416 % U+03DF GREEK SMALL LETTER KOPPA
17417 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17418 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17419 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17420 % U+03E1 GREEK SMALL LETTER SAMPI
17421 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17422 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17423 % \backepsilon (AmS)
17424 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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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17425 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17426 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17427 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17428 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17429 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17430 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17431 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17432 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17433 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17434 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
17435 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17436 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17437 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17438 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17439 % Icyrrilic, *afii10055
17440 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17441 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
17442 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17443 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17444 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17445 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17446 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17447 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17448 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17449 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17450 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17451 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17452 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17453 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17454 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17455 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17456 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
17457 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17458 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17459 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17460 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17461 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17462 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17463 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17464 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17465 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17466 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17467 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17468 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17469 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17470 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17471 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17472 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17473 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17474 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17475 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17476 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17477 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrilic, *afii10026
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17478 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17479 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17480 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17481 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17482 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17483 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17484 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17485 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17486 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17487 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17488 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17489 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17490 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17491 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17492 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17493 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17494 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17495 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17496 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17497 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17498 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17499 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17500 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17501 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17502 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17503 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17504 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17505 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17506 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17507 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17508 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17509 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17510 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17511 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17512 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17513 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17514 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17515 % Hardsigncyrillic, *afii10044
17516 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17517 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17518 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17519 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17520 % Softsigncyrillic, *afii10046
17521 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17522 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17523 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17524 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17525 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17526 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17527 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17528 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17529 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17530 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17531 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17532 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17533 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17534 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic

17535 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17536 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17537 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
17538 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17539 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17540 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17541 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17542 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17543 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17544 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17545 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17546 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17547 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17548 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17549 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17550 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17551 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17552 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
17553 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17554 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
17555 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17556 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
17557 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17558 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
17559 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17560 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17561 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17562 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
17563 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17564 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
17565 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17566 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
17567 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17568 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
17569 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17570 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
17571 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17572 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
17573 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17574 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446
17575 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17576 \DeclareTextCommand{\cyr ch}{PU}{\84\107}% U+0447
17577 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17578 \DeclareTextCommand{\cyr sh}{PU}{\84\110}% U+0448
17579 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17580 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17581 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17582 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17583 %* \cyrhrdsn -> \hardsign (tipa)
17584 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17585 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
17586 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17587 \DeclareTextCommand{\cyr sftsn}{PU}{\84\114}% U+044C
17588 %* \cyr sftsn -> \softsign (tipa)
17589 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17590 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D

17591 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17592 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17593 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17594 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17595 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17596 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17597 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17598 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17599 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17600 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17601 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17602 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17603 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17604 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17605 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17606 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17607 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17608 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17609 % *afii10103, icyrillic
17610 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17611 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17612 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17613 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17614 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17615 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17616 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17617 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17618 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17619 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17620 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17621 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17622 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17623 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17624 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17625 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17626 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17627 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17628 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17629 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17630 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17631 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17632 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17633 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17634 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17635 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17636 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17637 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17638 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17639 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17640 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17641 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17642 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17643 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17644 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17645 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17646 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467

17647 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17648 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17649 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17650 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17651 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17652 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17653 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17654 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17655 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17656 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17657 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17658 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17659 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17660 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17661 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17662 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17663 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17664 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17665 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17666 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17667 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17668 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17669 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17670 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17671 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17672 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17673 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17674 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17675 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; Izhitsadblgravecyrillic
17676 % GRAVE ACCENT; Izhitsadblgravecyrillic
17677 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17678 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; izhitsadblgravecyrillic
17679 % GRAVE ACCENT; izhitsadblgravecyrillic
17680 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17681 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17682 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17683 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17684 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17685 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
17686 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17687 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17688 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17689 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
locyrillic
17690 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17691 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
cyrillic
17692 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17693 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17694 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17695 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17696 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F

17697 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17698 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17699 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17700 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17701 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17702 \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
 17703 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17704 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17705 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17706 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17707 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17708 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17709 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17710 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17711 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17712 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17713 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17714 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17715 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17716 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17717 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17718 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17719 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17720 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17721 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17722 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17723 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17724 % Ghemiddlehookcyrillic
 17725 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17726 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17727 % ghemiddlehookcyrillic
 17728 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17729 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17730 % Zhedescendercyrillic
 17731 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17732 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17733 % zhedescendercyrillic
 17734 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17735 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17736 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17737 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17738 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-

cyrillic

17739 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499

17740 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

17741 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

17742 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

17743 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic

17744 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

17745 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;

17746 % Kavertikalstrokecyrillic

17747 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C

17748 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17749 % kavertikalstrokecyrillic

17750 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17751 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic

17752 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E

17753 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

17754 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

17755 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic

17756 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0

17757 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic

17758 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17759 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

17760 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2

17761 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic

17762 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3

17763 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic

17764 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4

17765 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic

17766 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5

17767 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic

17768 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6

17769 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic

17770 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

17771 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic

17772 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8

17773 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

17774 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9

17775 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic

17776 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA

17777 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17778 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic

17779 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

17780 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB

17781 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17782 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17783 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17784 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
17785 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17786 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17787 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17788 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17789 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
17790 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17791 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
17792 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17793 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
17794 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17795 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17796 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17797 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17798 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17799 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17800 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17801 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17802 % Chedescendercyrillic
17803 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17804 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17805 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17806 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17807 % Cheverticalstrokecyrillic
17808 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17809 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17810 % cheverticalstrokecyrillic
17811 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17812 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17813 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17814 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17815 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17816 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17817 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17818 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17819 \DeclareTextCommand{\cyrahbch}{PU}{\84\275}% U+04BD
17820 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17821 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17822 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17823 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17824 \DeclareTextCommand{\cyrahbchdsc}{PU}{\84\277}% U+04BF
17825 \DeclareTextCompositeCommand{\k}{PU}{\cyrahbch}{\84\277}% U+04BF
17826 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17827 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17828 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17829 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17830 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17831 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

17832 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17833 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17834 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17835 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17836 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17837 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17838 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17839 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 17840 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17841 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17842 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17843 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17844 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17845 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17846 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17847 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17848 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17849 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17850 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17851 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17852 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17853 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17854 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17855 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17856 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 17857 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17858 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17859 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17860 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17861 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17862 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17863 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17864 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17865 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17866 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17867 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17868 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17869 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17870 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17871 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17872 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17873 % Schwadiescyrillic
 17874 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17875 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17876 % schwadiescyrillic
 17877 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17878 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17879 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17880 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
 cyrillic
 17881 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17882 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-

cyrillic

17883 \DeclareTextCompositeCommand{\}{PU}{\CYRZ}{\84\336}% U+04DE

17884 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

17885 \DeclareTextCompositeCommand{\}{PU}{\cyrz}{\84\337}% U+04DF

17886 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic

17887 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0

17888 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic

17889 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

17890 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17891 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2

17892 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17893 \DeclareTextCompositeCommand{=}{PU}{\cyrI}{\84\343}% U+04E3

17894 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

17895 \DeclareTextCompositeCommand{\}{PU}{\CYRI}{\84\344}% U+04E4

17896 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

17897 \DeclareTextCompositeCommand{\}{PU}{\cyrI}{\84\345}% U+04E5

17898 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

17899 \DeclareTextCompositeCommand{\}{PU}{\CYRO}{\84\346}% U+04E6

17900 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17901 \DeclareTextCompositeCommand{\}{PU}{\cyro}{\84\347}% U+04E7

17902 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

17903 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17904 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17905 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

17906 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

17907 % Obarreddieresiscyrillic

17908 \DeclareTextCompositeCommand{\}{PU}{\CYROTLD}{\84\352}% U+04EA

17909 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

17910 % obarreddieresiscyrillic

17911 \DeclareTextCompositeCommand{\}{PU}{\cyrotld}{\84\353}% U+04EB

17912 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

17913 \DeclareTextCompositeCommand{\}{PU}{\CYREREV}{\84\354}% U+04EC

17914 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

17915 \DeclareTextCompositeCommand{\}{PU}{\cyreref}{\84\355}% U+04ED

17916 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

17917 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE

17918 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

17919 \DeclareTextCompositeCommand{=}{PU}{\cyrU}{\84\357}% U+04EF

17920 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

17921 \DeclareTextCompositeCommand{\}{PU}{\CYRU}{\84\360}% U+04F0

17922 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

17923 \DeclareTextCompositeCommand{\}{PU}{\cyru}{\84\361}% U+04F1

17924 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17925 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

17926 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

17927 \DeclareTextCompositeCommand{\H}{PU}{\cyrU}{\84\363}% U+04F3

17928 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

17929 \DeclareTextCompositeCommand{\}{PU}{\CYRCH}{\84\364}% U+04F4

17930 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

cyrillic

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17931 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17932 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17933 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17934 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17935 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17936 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17937 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17938 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17939 \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
17940 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17941 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17942 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17943 \DeclareTextCommand{\cyrhk}{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

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51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

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17944 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17945 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17946 % U+05D0 HEBREW LETTER ALEF
17947 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17948 % U+05D1 HEBREW LETTER BET
17949 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17950 % U+05D2 HEBREW LETTER GIMEL
17951 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17952 % U+05D3 HEBREW LETTER DALET
17953 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17954 % U+05D4 HEBREW LETTER HE
17955 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17956 % U+05D5 HEBREW LETTER VAV
17957 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17958 % U+05D6 HEBREW LETTER ZAYIN
17959 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17960 % U+05D7 HEBREW LETTER HET
17961 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
17962 % U+05D8 HEBREW LETTER TET
17963 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17964 % U+05D9 HEBREW LETTER YOD
17965 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17966 % U+05DA HEBREW LETTER FINAL KAF
17967 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17968 % U+05DB HEBREW LETTER KAF
17969 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
17970 % U+05DC HEBREW LETTER LAMED
17971 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17972 % U+05DD HEBREW LETTER FINAL MEM
17973 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

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17974 % U+05DE HEBREW LETTER MEM
 17975 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17976 % U+05DF HEBREW LETTER FINAL NUN
 17977 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17978 % U+05E0 HEBREW LETTER NUN
 17979 \DeclareTextCommand{\hebnnun}{PU}{\85\340}% U+05E0
 17980 % U+05E1 HEBREW LETTER SAMEKH
 17981 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17982 % U+05E2 HEBREW LETTER AYIN
 17983 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17984 % U+05E3 HEBREW LETTER FINAL PE
 17985 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17986 % U+05E4 HEBREW LETTER PE
 17987 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17988 % U+05E5 HEBREW LETTER FINAL TSADI
 17989 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17990 % U+05E6 HEBREW LETTER TSADI
 17991 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17992 % U+05E7 HEBREW LETTER QOF
 17993 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17994 % U+05E8 HEBREW LETTER RESH
 17995 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17996 % U+05E9 HEBREW LETTER SHIN
 17997 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17998 %* \hebshin -> \hebsin (he8)
 17999 % U+05EA HEBREW LETTER TAV
 18000 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 18001 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 18002 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 18003 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 18004 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 18005 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 18006 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

18007 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 18008 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

18009 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsc (tipa)
 18010 \DeclareTextCommand{\textsc}{PU}{\9035\000}% U+1D00
 18011 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18012 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 18013 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 18014 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 18015 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 18016 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 18017 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textस्क (tipx)
 18018 \DeclareTextCommand{\textPUस्क}{PU}{\9035\013}% U+1D0B
 18019 %* \textPUस्क -> \textस्क (tipx)
 18020 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 18021 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 18022 %* \textPUscm -> \textscm (tipx)
 18023 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 18024 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 18025 %* \textPUscp -> \textscp (tipx)

18026 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18027 \DeclareTextCommand{\textPurevscr}{PU}{\9035\031}% U+1D19
 18028 %* \textPurevscr -> \textrevscr (tipx)
 18029 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 18030 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 18031 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18032 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 18033 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18034 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 18035 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18036 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 18037 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18038 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 18039 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18040 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 18041 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18042 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 18043 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18044 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18045 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18046 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18047 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18048 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18049 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18050 % \barsci (wsuipa)
 18051 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18052 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18053 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18054 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18055 % \barscu (wsuipa)
 18056 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18057 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18058 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18059 %* \textPURhooka -> \textrhooka (tipx)
 18060 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18061 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18062 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18063 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18064 %* \textPURhooke -> \textrhooke (tipx)
 18065 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18066 % \textrhookepsilon (tipx)
 18067 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18068 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18069 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18070 % \textrhookopeno (tipx)
 18071 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18072 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18073 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18074 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18075 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow

18076 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18077 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18078 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
18079 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18080 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
18081 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18082 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18083 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18084 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18085 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18086 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18087 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18088 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18089 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18090 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
18091 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18092 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18093 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18094 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18095 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18096 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18097 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18098 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18099 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18100 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18101 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18102 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18103 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18104 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18105 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18106 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18107 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18108 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18109 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18110 % Emacrongrave
18111 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18112 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18113 % emacrongrave
18114 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18115 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18116 % Emacronacute
18117 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18118 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18119 % emacronacute
18120 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18121 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18122 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18123 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18124 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18125 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18126 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18127 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18128 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B

18129 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 18130 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 18131 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 18132 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 18133 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 18134 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 18135 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 18136 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 18137 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 18138 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 18139 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 18140 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 18141 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
 18142 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
 18143 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
 18144 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
 18145 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 18146 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 18147 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 18148 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 18149 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 18150 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 18151 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 18152 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 18153 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
 18154 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
 18155 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
 18156 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
 18157 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
 18158 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
 18159 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
 18160 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
 18161 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 18162 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 18163 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 18164 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
 18165 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
 18166 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
 18167 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
 18168 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
 18169 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
 18170 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
 18171 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
 18172 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
 18173 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
 18174 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
 18175 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
 18176 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
 18177 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
 18178 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
 18179 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
 18180 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
 18181 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
 cumflexbelow
 18182 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
 18183 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
 cumflexbelow

18184 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
 18185 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 18186 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
 18187 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 18188 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
 18189 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 18190 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 18191 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 18192 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 18193 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 18194 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
 18195 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 18196 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
 18197 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18198 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 18199 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18200 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18201 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18202 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18203 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18204 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18205 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18206 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18207 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18208 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18209 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18210 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18211 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18212 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18213 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18214 % Omacrongrave
 18215 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18216 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18217 % omacrongrave
 18218 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18219 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18220 % Omacronacute
 18221 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18222 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18223 % omacronacute
 18224 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18225 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18226 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18227 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18228 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18229 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18230 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18231 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18232 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18233 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18234 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18235 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18236 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18237 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18238 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A

18239 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18240 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18241 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18242 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18243 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18244 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18245 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18246 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18247 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18248 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18249 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18250 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18251 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18252 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18253 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18254 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18255 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18256 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18257 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18258 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18259 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18260 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18261 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18262 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18263 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18264 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18265 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18266 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18267 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18268 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18269 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18270 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18271 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18272 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18273 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18274 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18275 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18276 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18277 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18278 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18279 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18280 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18281 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18282 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18283 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18284 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18285 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18286 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18287 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18288 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18289 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave

18290 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18291 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18292 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18293 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18294 \DeclareTextCompositeCommand{\' }{PU}{W}{\9036\202}% U+1E82
18295 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18296 \DeclareTextCompositeCommand{\' }{PU}{w}{\9036\203}% U+1E83
18297 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18298 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18299 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18300 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18301 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18302 \DeclareTextCompositeCommand{\. }{PU}{W}{\9036\206}% U+1E86
18303 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18304 \DeclareTextCompositeCommand{\. }{PU}{w}{\9036\207}% U+1E87
18305 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18306 \DeclareTextCompositeCommand{\d }{PU}{W}{\9036\210}% U+1E88
18307 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18308 \DeclareTextCompositeCommand{\d }{PU}{w}{\9036\211}% U+1E89
18309 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18310 \DeclareTextCompositeCommand{\. }{PU}{X}{\9036\212}% U+1E8A
18311 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18312 \DeclareTextCompositeCommand{\. }{PU}{x}{\9036\213}% U+1E8B
18313 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18314 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18315 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18316 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18317 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18318 \DeclareTextCompositeCommand{\. }{PU}{Y}{\9036\216}% U+1E8E
18319 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18320 \DeclareTextCompositeCommand{\. }{PU}{y}{\9036\217}% U+1E8F
18321 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18322 \DeclareTextCompositeCommand{\^ }{PU}{Z}{\9036\220}% U+1E90
18323 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18324 \DeclareTextCompositeCommand{\^ }{PU}{z}{\9036\221}% U+1E91
18325 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18326 \DeclareTextCompositeCommand{\d }{PU}{Z}{\9036\222}% U+1E92
18327 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18328 \DeclareTextCompositeCommand{\d }{PU}{z}{\9036\223}% U+1E93
18329 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18330 \DeclareTextCompositeCommand{\b }{PU}{Z}{\9036\224}% U+1E94
18331 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18332 \DeclareTextCompositeCommand{\b }{PU}{z}{\9036\225}% U+1E95
18333 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18334 \DeclareTextCompositeCommand{\b }{PU}{h}{\9036\226}% U+1E96
18335 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18336 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18337 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18338 \DeclareTextCompositeCommand{\r }{PU}{w}{\9036\230}% U+1E98
18339 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18340 \DeclareTextCompositeCommand{\r }{PU}{y}{\9036\231}% U+1E99
18341 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18342 \DeclareTextCompositeCommand{\. }{PU}{\textlongS}{\9036\233}% U+1E9B
18343 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18344 \DeclareTextCompositeCommand{\d }{PU}{A}{\9036\240}% U+1EA0
18345 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow

18346 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18347 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18348 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18349 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18350 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18351 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18352 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18353 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18354 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18355 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18356 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18357 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18358 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18359 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18360 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18361 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18362 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18363 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18364 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18365 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18366 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18367 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18368 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18369 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18370 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18371 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18372 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18373 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18374 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18375 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18376 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18377 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18378 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18379 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 18380 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18381 % U+2013 EN DASH; endash
 18382 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18383 % U+2014 EM DASH; emdash
 18384 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18385 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18386 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18387 %* \textbardbl -> \textdoublevertline (tipa)
 18388 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18389 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18390 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18391 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18392 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18393 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18394 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18395 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18396 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18397 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18398 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18399 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18400 % U+2020 DAGGER; dagger

18401 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18402 %* \textdagger -> \dag (LaTeX)
 18403 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18404 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18405 %* \textdaggerdbl -> \ddagger (LaTeX)
 18406 %* \textdaggerdbl -> \ddag (LaTeX)
 18407 % U+2022 BULLET; bullet
 18408 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18409 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18410 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18411 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18412 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18413 %* \textellipsis -> \mathellipsis
 18414 % U+2030 PER MILLE SIGN; perthousand
 18415 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18416 % U+2031 PER TEN THOUSAND SIGN
 18417 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18418 % U+2032 PRIME; minute; \prime (MnSymbol)
 18419 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18420 % U+2033 DOUBLE PRIME; \second (mathabx)
 18421 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18422 % U+2034 TRIPLE PRIME; \third (mathabx)
 18423 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18424 % U+2035 REVERSED PRIME; \backprime (AmsS)
 18425 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18426 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18427 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18428 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 18429 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18430 % U+203B REFERENCE MARK; referencemark
 18431 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18432 % U+203D INTERROBANG
 18433 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18434 % U+2044 FRACTION SLASH; fraction
 18435 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18436 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18437 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18438 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18439 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18440 % U+2052 COMMERCIAL MINUS SIGN
 18441 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18442 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18443 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18444 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18445 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18446 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18447 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18448 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18449 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18450 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18451 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18452 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18453 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074

18454 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18455 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18456 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18457 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18458 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18459 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18460 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18461 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18462 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18463 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18464 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18465 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18466 % U+207B SUPERSCRIPT MINUS
 18467 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18468 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18469 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18470 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18471 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18472 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18473 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18474 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18475 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18476 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18477 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18478 % U+2081 SUBSCRIPT ONE; oneinferior
 18479 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18480 % U+2082 SUBSCRIPT TWO; twoinferior
 18481 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18482 % U+2083 SUBSCRIPT THREE; threeinferior
 18483 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18484 % U+2084 SUBSCRIPT FOUR; fourinferior
 18485 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18486 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18487 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18488 % U+2086 SUBSCRIPT SIX; sixinferior
 18489 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18490 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18491 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18492 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18493 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18494 % U+2089 SUBSCRIPT NINE; nineinferior
 18495 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18496 % U+208A SUBSCRIPT PLUS SIGN
 18497 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18498 % U+208B SUBSCRIPT MINUS
 18499 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18500 % U+208C SUBSCRIPT EQUALS SIGN
 18501 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18502 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18503 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18504 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18505 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18506 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18507 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18508 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18509 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18510 % U+2092 LATIN SUBSCRIPT SMALL LETTER O

18511 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18512 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18513 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18514 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18515 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18516 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18517 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18518 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18519 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18520 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18521 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18522 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18523 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18524 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18525 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18526 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18527 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18528 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18529 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18530 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18531 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18532 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18533 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18534 % U+20A4 LIRA SIGN; afi08941, *lira
 18535 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18536 % U+20A6 NAIRA SIGN
 18537 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18538 % U+20A7 PESETA SIGN; peseta
 18539 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18540 % U+20A9 WON SIGN; won
 18541 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18542 % U+20AB DONG SIGN; dong
 18543 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18544 % U+20AC EURO SIGN; *Euro, euro
 18545 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18546 %* \texteuro -> \EurDig (marvosym)
 18547 %* \texteuro -> \EURdig (marvosym)
 18548 %* \texteuro -> \EurHv (marvosym)
 18549 %* \texteuro -> \EURhv (marvosym)
 18550 %* \texteuro -> \EurCr (marvosym)
 18551 %* \texteuro -> \EURcr (marvosym)
 18552 %* \texteuro -> \EurTm (marvosym)
 18553 %* \texteuro -> \EURtm (marvosym)
 18554 %* \texteuro -> \Eur (marvosym)
 18555 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18556 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18557 %* \textDeleatur -> \Denarius (marvosym)
 18558 % U+20B1 PESO SIGN
 18559 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18560 % U+20B2 GUARANI SIGN
 18561 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18562 % U+2103 DEGREE CELSIUS; centigrade
 18563 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103

18564 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18565 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18566 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18567 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18568 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18569 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18570 % U+2116 NUMERO SIGN; *afii61352, numero
 18571 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18572 % U+2117 SOUND RECORDING COPYRIGHT
 18573 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18574 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18575 % weierstrass; \wp (LaTeX)
 18576 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18577 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18578 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18579 % U+211E PRESCRIPTION TAKE; prescription
 18580 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18581 % U+2120 SERVICE MARK
 18582 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18583 % U+2122 TRADE MARK SIGN; trademark
 18584 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18585 % U+2126 OHM SIGN; Ohm, Omega
 18586 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18587 % U+2127 INVERTED OHM SIGN
 18588 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18589 %* \textmho -> \agemO (wasysym)
 18590 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18591 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18592 % U+212B ANGSTROM SIGN; angstrom
 18593 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18594 % U+212E ESTIMATED SYMBOL; estimated
 18595 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18596 %* \textestimated -> \EstimatedSign (marvosym)
 18597 %* \textestimated -> \Ecommerce (marvosym)
 18598 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18599 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18600 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18601 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18602 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18603 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18604 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18605 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18606 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18607 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18608 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18609 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18610 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18611 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18612 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18613 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18614 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18615 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18616 % U+2150 VULGAR FRACTION ONE SEVENTH
 18617 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150

18618 % U+2151 VULGAR FRACTION ONE NINTH
 18619 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18620 % U+2152 VULGAR FRACTION ONE TENTH
 18621 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18622 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18623 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18624 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18625 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18626 % U+2155 VULGAR FRACTION ONE FIFTH
 18627 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18628 % U+2156 VULGAR FRACTION TWO FIFTHS
 18629 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18630 % U+2157 VULGAR FRACTION THREE FIFTHS
 18631 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157
 18632 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18633 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18634 % U+2159 VULGAR FRACTION ONE SIXTH
 18635 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18636 % U+215A VULGAR FRACTION FIVE SIXTHS
 18637 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18638 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18639 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18640 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18641 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18642 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18643 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18644 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18645 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18646 % U+2184 LATIN SMALL LETTER REVERSED C
 18647 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18648 % U+2189 VULGAR FRACTION ZERO THIRDS
 18649 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18650 % U+2190 LEFTWARDS ARROW; arrowleft
 18651 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18652 % U+2191 UPWARDS ARROW; arrowup
 18653 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18654 % U+2192 RIGHTWARDS ARROW; arrowright
 18655 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18656 %* \textrightarrow -> \MVRightArrow (marvosym)
 18657 %* \textrightarrow -> \MVRightarrow (marvosym)
 18658 % U+2193 DOWNWARDS ARROW; arrowdown
 18659 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18660 %* \textdownarrow -> \MVArrowDown (marvosym)
 18661 %* \textdownarrow -> \Force (marvosym)
 18662 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18663 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18664 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18665 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18666 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18667 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18668 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18669 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18670 %* \textnearrow -> \textglobrise (tipa)
 18671 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18672 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198

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18673 %* \textsearrow -> \textglobfall (tipa)
18674 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18675 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18676 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
18677 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18678 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
18679 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18680 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18681 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18682 % \twoheadleftarrow (txfonts/pxfonts)
18683 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18684 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18685 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18686 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18687 % \twoheadrightarrow (AmS)
18688 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18689 % \twoheadrightarrow (txfonts/pxfonts)
18690 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18691 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18692 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18693 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18694 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18695 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18696 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18697 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18698 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18699 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18700 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18701 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18702 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18703 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18704 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18705 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18706 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18707 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18708 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18709 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18710 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18711 %* \textlightning -> \Lightning (marvosym)
18712 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18713 % \dls (mathabx)
18714 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18715 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18716 % \curvearrowleft (AmS)
18717 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18718 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18719 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18720 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18721 % \leftharpoonup (LaTeX)
18722 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18723 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18724 % \leftharpoondown (LaTeX)
18725 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18726 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18727 % \upharpoonright (AmS)

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18728 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18729 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18730 % \upharpoonleft (AmS)
18731 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18732 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18733 % \rightharpoonup (LaTeX)
18734 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18735 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18736 % \rightharpoondown (LaTeX)
18737 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18738 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18739 % \downharpoonright (AmS)
18740 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18741 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18742 % \downharpoonleft (AmS)
18743 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18744 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18745 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18746 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18747 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18748 % \updownarrows (MnSymbol)
18749 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18750 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18751 % \leftrightharpoons (AmS)
18752 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\306}%* U+21C6
18753 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18754 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18755 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18756 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18757 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18758 \DeclareTextCommand{\textrightrightarrows}{PU}{\9041\311}%* U+21C9
18759 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18760 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18761 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18762 % \leftrightharpoons (AmS);
18763 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18764 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18765 % \rightleftharpoons (LaTeX, AmS)
18766 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18767 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18768 % \nLeftarrow (AmS)
18769 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18770 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
      row (AmS)
18771 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18772 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
18773 % \nRightarrow (AmS)
18774 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18775 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18776 % \Leftarrow (LaTeX)
18777 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18778 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)

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18779 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18780 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18781 % \Rrightarrow (LaTeX)
18782 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18783 %* \textRrightarrow -> \Conclusion (marvosym)
18784 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18785 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18786 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18787 % \Leftrightarrow (LaTeX)
18788 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18789 %* \textLeftrightarrow -> \Equivalence (marvosym)
18790 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18791 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18792 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18793 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18794 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18795 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18796 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18797 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18798 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18799 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18800 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18801 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18802 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18803 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18804 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18805 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18806 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18807 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18808 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18809 % \dashleftarrow (AmS)
18810 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18811 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18812 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18813 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18814 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
18815 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18816 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18817 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
18818 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18819 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18820 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18821 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18822 % \downuparrows (MnSymbol)
18823 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18824 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18825 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18826 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18827 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18828 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle (stmaryrd)
18829 \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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18830 % U+2200 FOR ALL; forall; \forall (LaTeX)
18831 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18832 % U+2201 COMPLEMENT; \complement (AmS)
18833 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18834 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18835 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18836 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18837 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18838 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18839 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18840 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18841 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18842 %* \textemptyset -> \varnothing (AmS)
18843 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18844 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18845 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18846 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18847 % U+2208 ELEMENT OF; element; \in (LaTeX)
18848 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18849 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18850 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18851 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18852 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18853 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18854 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18855 %* \textni -> \owns (mathabx)
18856 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18857 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18858 %* \textnotowner -> \notni (txfonts/pxfonts)
18859 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18860 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18861 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18862 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18863 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18864 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18865 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18866 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18867 % U+2212 MINUS SIGN; minus
18868 \DeclareTextCommand{\textminus}{PU}{\9042\022}%* U+2212
18869 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18870 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18871 % U+2214 DOT PLUS; \dotplus (AmS)
18872 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18873 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18874 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18875 % \DividesNot (marvosym)
18876 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18877 % U+2216 SET MINUS; \setminus (LaTeX)
18878 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18879 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18880 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18881 % U+2218 RING OPERATOR; \circ (LaTeX)
18882 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18883 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18884 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}%* U+2219
18885 % U+221A SQUARE ROOT; radical

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18886 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18887 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18888 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18889 %* \textpropto -> \varprop (wasysym)
18890 % U+221E INFINITY; infinity; \infty (LaTeX)
18891 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18892 % U+2220 ANGLE; angle; \angle (LaTeX)
18893 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18894 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18895 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18896 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18897 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18898 %* \textsphericalangle -> \varangle (wasysym)
18899 %* \textsphericalangle -> \Anglesign (marvosym)
18900 %* \textsphericalangle -> \AngleSign (marvosym)
18901 % U+2223 DIVIDES; divides; \mid (LaTeX)
18902 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18903 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18904 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18905 %* \textnmid -> \notdivides (mathabx)
18906 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18907 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18908 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18909 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18910 %* \textnparallel -> nUpdownline (MnSymbol)
18911 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18912 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18913 % \owedge (stmaryrd)
18914 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18915 %* \textowedge -> \varowedge (stmaryrd)
18916 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18917 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18918 % \ovee (stmaryrd)
18919 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18920 %* \textovee -> \varovee (stmaryrd)
18921 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18922 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18923 % U+222A UNION; union; \cup (LaTeX)
18924 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18925 % U+222B INTEGRAL; integral; \int (LaTeX)
18926 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18927 %* \textint -> \varint (wasysym)
18928 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18929 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18930 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18931 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18932 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18933 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18934 %* \textoint -> \varoint (wasysym)
18935 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18936 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18937 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18938 % \ointclockwise (txfonts/pxfonts)
18939 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18940 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
    fonts/pxfonts)
18941 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233

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18942 % U+2234 THEREFORE; therefore; \therefore (AmS)
 18943 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
 18944 %* \texttherefore -> uptherefore (MnSymbol)
 18945 % U+2235 BECAUSE; because; \because (AmS)
 18946 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
 18947 %* \textbecause -> \downtherefore (MnSymbol)
 18948 % U+2236 RATIO; \vdotdot (MnSymbol)
 18949 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
 18950 % U+2237 PROPORTION; \squaredots (MnSymbol)
 18951 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
 18952 % U+2238 DOT MINUS; \dotminus (MnSymbol)
 18953 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
 18954 %* \textdotminus -> \textdotdiv (mathabx)
 18955 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
 18956 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
 18957 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
 18958 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
 18959 %* \textsim -> \AC (wasysym)
 18960 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
 18961 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
 18962 % \nbacksim (txfonts/pxfonts)
 18963 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
 18964 % U+2240 WREATH PRODUCT; \wr (LaTeX)
 18965 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
 18966 %* \textwr -> \wreath (MnSymbol)
 18967 % U+2241 NOT TILDE; \nsim (AmS)
 18968 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
 18969 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
 18970 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
 18971 % \neqsim (MnSymbol)
 18972 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
 18973 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
 18974 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
 18975 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
 18976 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
 18977 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
 18978 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
 18979 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
 18980 % \ncong (AmS)
 18981 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
 18982 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
 18983 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
 18984 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
 18985 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
 18986 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
 18987 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
 18988 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
 18989 % \napproxeq (txfonts/pxfonts)
 18990 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
 18991 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
 18992 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
 18993 %* \texttriplesim -> \VHF (wasysym)
 18994 % \ntriplesim (MnSymbol)
 18995 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
 18996 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
 18997 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C

18998 % \nbackcong (MnSymbol)
18999 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
19000 % U+224D EQUIVALENT TO; \asymp (LaTeX)
19001 \DeclareTextCommand{\textasym}{PU}{\9042\115}%* U+224D
19002 % \nasym (txfonts/pxfonts)
19003 \DeclareTextCommand{\textnasym}{PU}{\9042\115\83\070}%* U+224D U+0338
19004 %* \textnasym -> \notasym (mathabx)
19005 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
19006 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
19007 % \nBumpeq (txfonts/pxfonts)
19008 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
19009 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
19010 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
19011 % \nbumpeq (txfonts/pxfonts)
19012 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
19013 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
19014 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
19015 % \ndoteq (MnSymbol)
19016 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
19017 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
19018 % \doteqdot (AmS)
19019 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
19020 %* \textdoteqdot -> \Doteq (MnSymbol)
19021 % \nDoteq (MnSymbol)
19022 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
19023 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
19024 % \fallingdotseq (AmS)
19025 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
19026 % \nfallingdotseq (MnSymbol)
19027 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
19028 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
matelyequal;
19029 % \risingdotseq (AmS)
19030 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
19031 % \nrisingdoteq (MnSymbol)
19032 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
19033 % U+2254 COLON EQUALS; \colonequals (colonequals)
19034 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
19035 % U+2255 EQUALS COLON; \equalscolon (colonequals)
19036 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
19037 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
19038 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
19039 % \neqcirc (MnSymbol)
19040 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19041 % U+2257 RING EQUAL TO; \circeq (AmS)
19042 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19043 % \ncirceq (MnSymbol)
19044 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19045 % U+2259 ESTIMATES; \hateq (MnSymbol)
19046 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19047 %* \texthateq -> \corresponds (mathabx)
19048 %* \texthateq -> \Corresponds (marvosym)
19049 % \nhateq (MnSymbol)
19050 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19051 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19052 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C

19053 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19054 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19055 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19056 %* \textneq -> \nequal (MnSymbol)
 19057 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19058 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19059 %* \textequiv -> \Congruent (marvosym)
 19060 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
 19061 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19062 %* \textnequiv -> \NotCongruent (marvosym)
 19063 %* \textnequiv -> \notequiv (mathabx)
 19064 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19065 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19066 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19067 %* \textleq -> \LessOrEqual (marvosym)
 19068 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
 19069 % \ge (LaTeX), \geq (LaTeX)
 19070 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 19071 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 19072 %* \textgeq -> \LargerOrEqual (marvosym)
 19073 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
 19074 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 19075 % \nleqq (txfonts/pxfonts)
 19076 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
 19077 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
 19078 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 19079 % \ngeqq (txfonts/pxfonts)
 19080 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19081 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19082 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19083 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19084 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19085 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
 19086 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19087 % \nll (txfonts/pxfonts)
 19088 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19089 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
 19090 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19091 % \ngg (txfonts/pxfonts)
 19092 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19093 % U+226C BETWEEN; \between (AmS)
 19094 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19095 % U+226E NOT LESS-THAN; notless; \nless (AmS)
 19096 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19097 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
 19098 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19099 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
 19100 % \nleq (AmS)
 19101 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19102 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
 \ngeq (AmS)
 19103 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19104 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lesssim (AmS)
 19105 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
 19106 %* \textlessim -> \apprle (wasysym)
 19107 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)

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19108 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19109 %* \textgtrsim -> \apprge (wasysym)
19110 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
      fonts/pxfonts)
19111 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19112 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
      fonts/pxfonts)
19113 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19114 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19115 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19116 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19117 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19118 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
      fonts/pxfonts)
19119 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19120 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
19121 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19122 % U+227A PRECEDES; precedes; \prec (LaTeX)
19123 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19124 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19125 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19126 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19127 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19128 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19129 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19130 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19131 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19132 % \nprecsim (txfonts/pxfonts)
19133 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19134 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19135 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19136 % \nsuccsim (txfonts/pxfonts)
19137 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19138 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19139 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19140 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
19141 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19142 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19143 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19144 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19145 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19146 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19147 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19148 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19149 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19150 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19151 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19152 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19153 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19154 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19155 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19156 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19157 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19158 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
19159 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A

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19160 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
19161 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19162 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19163 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19164 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19165 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19166 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19167 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19168 % \nsqsubset (txfonts/pxfonts)
19169 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19170 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19171 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19172 % \nsqsupset (txfonts/pxfonts)
19173 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19174 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
19175 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
19176 % \nsqsubseq (txfonts/pxfonts)
19177 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19178 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19179 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19180 % \nsqsupseteq (txfonts/pxfonts)
19181 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19182 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19183 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19184 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19185 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19186 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19187 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19188 %* \textoplus -> \varoplus (stmaryrd)
19189 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19190 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19191 %* \textominus -> \varominus (stmaryrd)
19192 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19193 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19194 %* \textotimes -> \varotimes (stmaryrd)
19195 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19196 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19197 %* \textoslash -> \varoslash (stmaryrd)
19198 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19199 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19200 %* \textodot -> \varodot (stmaryrd)
19201 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19202 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19203 %* \textcircledcirc -> \ocirc (mathabx)
19204 %* \textcircledcirc -> \varocircle (stmaryrd)
19205 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19206 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19207 %* \textcircledast -> \varoast (stmaryrd)
19208 %* \textcircledast -> \oasterisk (mathabx)
19209 % U+229D CIRCLED DASH; \circleddash (AmS)
19210 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19211 % U+229E SQUARED PLUS; \boxplus (AmS)
19212 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19213 % U+229F SQUARED MINUS; \boxminus (AmS)
19214 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19215 % U+22A0 SQUARED TIMES; \boxtimes (AmS)

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19216 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19217 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19218 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19219 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19220 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19221 %* \textvdash -> \rightvdash (MnSymbol)
19222 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19223 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19224 %* \textdashv -> \leftvdash (MnSymbol)
19225 % \ndashv (mathabx)
19226 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19227 %* \textndashv -> \nleftvdash (MnSymbol)
19228 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19229 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
19230 %* \textttop -> \downvdash (MnSymbol)
19231 % \ndownvdash (MnSymbol)
19232 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19233 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19234 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19235 %* \textbot -> \upvdash (MnSymbol)
19236 % \nupvdash (MnSymbol)
19237 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19238 %* \textnupvdash -> \nperp (MnSymbol)
19239 % U+22A8 TRUE; \Vdash (AmS)
19240 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19241 %* \textvDash -> \models (LaTeX)
19242 %* \textvDash -> \rightmodels (MnSymbol)
19243 % U+22A9 FORCES; \Vdash (AmS)
19244 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19245 %* \textVdash -> \rightVdash (MnSymbol)
19246 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19247 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19248 % \nVvdash (mathabx)
19249 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19250 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19251 % \VDash (mathabx)
19252 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19253 %* \textVDash -> \rightModels (MnSymbol)
19254 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19255 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19256 %* \textnvdash -> \nrightvdash (MnSymbol)
19257 % U+22AD NOT TRUE; \nvDash (AmS)
19258 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19259 %* \textnvDash -> \nrightmodels (MnSymbol)
19260 %* \textnvDash -> \nmodels (MnSymbol)
19261 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19262 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19263 %* \textnVdash -> \nrightVdash (MnSymbol)
19264 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
19265 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19266 %* \textnVDash -> \nrightModels (MnSymbol)
19267 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19268 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19269 %* \textlhd -> \lessclosed (MnSymbol)
19270 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19271 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3

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19272 %* \texttrhd -> \gtrclosed (MnSymbol)
19273 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19274 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19275 %* \textunlhd -> \leqclosed (MnSymbol)
19276 %* \textunlhd -> \triangleleft (MnSymbol)
19277 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19278 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19279 %* \textunrhd -> \geqclosed (MnSymbol)
19280 %* \textunrhd -> \triangleright (MnSymbol)
19281 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19282 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19283 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19284 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19285 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19286 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19287 % U+22BB XOR; \veebar (AmS)
19288 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19289 % U+22BC NAND; \barwedge (mathabx)
19290 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19291 % U+22C6 STAR OPERATOR; \star (LaTeX)
19292 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19293 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19294 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19295 % U+22C8 BOWTIE; \bowtie (LaTeX)
19296 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19297 %* \textbowtie -> \Bowtie (wasysym)
19298 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19299 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19300 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19301 % \rtimes (AmS)
19302 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19303 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19304 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19305 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19306 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19307 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19308 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19309 % \nbacksimeq (txfonts/pxfonts)
19310 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19311 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19312 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19313 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19314 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19315 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19316 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19317 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19318 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19319 % \nSubset (txfonts/pxfonts)
19320 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19321 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19322 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19323 % \nSupset (txfonts/pxfonts)
19324 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19325 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19326 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19327 %* \textCap -> \doublecap (mathabx)

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19328 % U+22D3 DOUBLE UNION; \Cup (AmS)
19329 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19330 %* \textCup -> \doublecup (mathabx)
19331 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19332 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19333 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19334 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19335 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19336 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19337 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19338 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19339 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19340 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19341 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
19342 % \lesseqgtr (AmS)
19343 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19344 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19345 % \gtreqless (AmS)
19346 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19347 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19348 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19349 % \ncurlyeqprec (mathabx)
19350 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19351 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19352 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19353 % \ncurlyeqsucc (mathabx)
19354 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19355 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19356 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19357 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19358 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19359 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19360 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19361 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19362 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19363 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19364 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19365 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19366 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19367 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19368 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19369 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19370 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19371 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19372 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19373 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19374 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19375 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19376 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19377 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19378 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19379 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19380 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)

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19381 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19382 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19383 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19384 % \ntrianglelefteq (AmS)
19385 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19386 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19387 % \ntrianglerighteq (AmS)
19388 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19389 %* \textntrianglerighteq -> \textngeqclosed
19390 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
19391 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19392 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19393 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19394 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19395 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19396 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19397 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19398 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19399 \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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19400 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19401 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19402 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19403 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19404 % U+2311 SQUARE LOZENGE; \wasyllozenge (wasysym)
19405 \DeclareTextCommand{\textwasyllozenge}{PU}{\9043\021}%* U+2311
19406 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19407 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19408 % U+231A WATCH; \clock (wasysym)
19409 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19410 %* \textclock -> \Clocklogo (marvosym)
19411 %* \textclock -> \ClockLogo (marvosym)
19412 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19413 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19414 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19415 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19416 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19417 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19418 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19419 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19420 % U+2322 FROWN; \frown (LaTeX)
19421 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19422 % U+2323 SMILE; \smile (LaTeX)
19423 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19424 % U+2328 KEYBOARD; \Keyboard (marvosym)
19425 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19426 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19427 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19428 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19429 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19430 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19431 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19432 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19433 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19434 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)

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19435 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19436 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19437 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19438 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19439 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19440 % \notbackslash (wasysym)
 19441 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19442 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 19443 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19444 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19445 % \APLleftarrowbox (wasysym)
 19446 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19447 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19448 % \APLrightarrowbox (wasysym)
 19449 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19450 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 parrowbox (wasysym)
 19451 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19452 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19453 % \APLdownarrowbox (wasysym)
 19454 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19455 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19456 % \APLinput (wasysym)
 19457 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19458 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19459 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19460 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19461 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19462 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19463 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19464 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19465 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19466 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19467 % \ForwardToIndex (marvosym)
 19468 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19469 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19470 % \RewindToIndex (marvosym)
 19471 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19472 % U+2422 BLANK SYMBOL
 19473 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19474 % U+2423 OPEN BOX; blank
 19475 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19476 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19477 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19478 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19479 % U+2460 CIRCLED DIGIT ONE; onecircle
 19480 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19481 % U+2461 CIRCLED DIGIT TWO; twocircle

19482 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
19483 % U+2462 CIRCLED DIGIT THREE; threecircle
19484 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
19485 % U+2463 CIRCLED DIGIT FOUR; fourcircle
19486 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
19487 % U+2464 CIRCLED DIGIT FIVE; fivecircle
19488 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
19489 % U+2465 CIRCLED DIGIT SIX; sixcircle
19490 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
19491 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
19492 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
19493 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
19494 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
19495 % U+2468 CIRCLED DIGIT NINE; ninecircle
19496 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
19497 % U+2469 CIRCLED NUMBER TEN; tencircle
19498 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
19499 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
19500 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
19501 % U+246B CIRCLED NUMBER TWELVE; twelvencircle
19502 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
19503 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
19504 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
19505 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
19506 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19507 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19508 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19509 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19510 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19511 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19512 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19513 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19514 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19515 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19516 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19517 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19518 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19519 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19520 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19521 % \CircledA (marvosym)
19522 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19523 %* \textCircledA -> \CleaningA
19524 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19525 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19526 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19527 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19528 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19529 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19530 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19531 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19532 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19533 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19534 % \CleaningF (marvosym)
19535 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19536 % \CleaningFF (marvosym)
19537 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19538 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

19539 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19540 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19541 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19542 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19543 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19544 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19545 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19546 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19547 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19548 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19549 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19550 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19551 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19552 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19553 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19554 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19555 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19556 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19557 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19558 % \CleaningP (marvosym)
 19559 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19560 % \CleaningPP (marvosym)
 19561 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19562 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19563 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19564 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19565 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19566 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19567 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19568 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19569 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19570 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19571 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19572 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19573 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19574 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19575 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19576 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19577 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19578 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19579 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19580 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19581 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19582 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19583 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19584 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19585 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19586 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19587 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19588 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19589 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19590 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19591 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19592 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19593 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19594 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19595 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6

19596 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19597 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19598 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19599 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19600 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19601 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19602 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19603 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19604 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19605 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19606 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19607 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19608 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19609 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19610 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19611 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19612 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19613 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19614 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19615 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19616 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19617 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19618 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19619 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19620 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19621 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19622 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19623 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19624 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19625 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19626 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19627 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19628 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19629 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19630 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19631 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19632 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19633 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19634 % U+24EA CIRCLED DIGIT ZERO
 19635 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19636 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19637 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19638 %* \textCuttingLine -> \Kutline (marvosym)
 19639 %* \textCuttingLine -> \CutLine (marvosym)
 19640 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19641 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19642 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19643 %* \textUParrow -> \MoveUp (marvosym)
 19644 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19645 % \bigtriangleup (LaTeX)
 19646 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19647 %* \textbigtriangleup -> \APLup (wasysym)

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19648 %* \textbigtriangleup -> \Bleech (marvosym)
19649 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19650 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19651 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19652 % whiterightpointingtriangle; \triangleright (LaTeX)
19653 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19654 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19655 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19656 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19657 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19658 %* \textDOWNarrow -> \MoveDown (marvosym)
19659 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
19660 % \bigtriangledown (LaTeX)
19661 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19662 %* \textbigtriangledown -> \APLdown (wasysym)
19663 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19664 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19665 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19666 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19667 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19668 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19669 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19670 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19671 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19672 %* \textdiamond -> \Diamond (wasysym)
19673 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19674 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19675 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19676 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19677 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19678 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19679 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19680 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19681 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19682 % \boxbar (stmaryrd)
19683 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19684 % U+25EF LARGE CIRCLE; largecircle
19685 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19686 %* \textbigcircle -> \varbigcirc (stmaryrd)
19687 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19688 % U+2601 CLOUD; \Cloud (ifsym)
19689 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19690 % U+2605 BLACK STAR; \FiveStar (bbding)
19691 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19692 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19693 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19694 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19695 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19696 %* \textPhone -> \Telefon (marvosym)
19697 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19698 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19699 %* \textboxempty -> \Box (wasysym)

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19700 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19701 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19702 %* \textCheckedbox -> \CheckedBox (marvosym)
 19703 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19704 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19705 %* \textCrossedbox -> \XBox (wasysym)
 19706 %* \textCrossedbox -> \CrossedBox (marvosym)
 19707 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19708 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19709 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19710 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19711 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19712 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19713 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19714 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19715 %* \textHandLeft -> \rightpointleft (fourier)
 19716 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19717 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19718 %* \textHandRight -> \leftpointright (fourier)
 19719 %* \textHandRight -> \PointingHand (marvosym)
 19720 %* \textHandRight -> \Pointinghand (marvosym)
 19721 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19722 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19723 %* \textRadioactivity -> \Radiation (ifsym)
 19724 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19725 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19726 % U+2625 ANKH; \Ankh (marvosym)
 19727 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19728 % U+262F YIN YANG; \YinYang (marvosym)
 19729 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19730 %* \textYinYang -> \Yinyang (marvosym)
 19731 %* \textYinYang -> \YingYang (marvosym)
 19732 %* \textYinYang -> \Yingyang (marvosym)
 19733 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19734 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19735 %* \textfrownie -> \Frowny (marvosym)
 19736 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19737 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19738 %* \textsmiley -> \Smiley (marvosym)
 19739 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19740 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19741 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19742 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19743 %* \textsun -> \Sun (marvosym)
 19744 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19745 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19746 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19747 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19748 % U+263F MERCURY; \mercury (wasysym)
 19749 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19750 %* \textmercury -> \Mercury (marvosym)
 19751 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19752 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19753 %* \textPUfemale -> \textfemale (tipx)
 19754 %* \textPUfemale -> \female (wasysym)
 19755 %* \textPUfemale -> \venus (wasysym)
 19756 %* \textPUfemale -> \Venus (marvosym)

19757 %* \textPUfemale -> \Female (marvosym)
 19758 % U+2641 EARTH; \earth (wasysym)
 19759 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
 19760 %* \textearth -> \Earth (marvosym)
 19761 % U+2642 MALE SIGN; male, mars; \male (wasysym)
 19762 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
 19763 %* \textmale -> \mars (wasysym)
 19764 %* \textmale -> \Mars (marvosym)
 19765 %* \textmale -> \Male (marvosym)
 19766 % U+2643 JUPITER; \jupiter (wasysym)
 19767 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
 19768 %* \textjupiter -> \Jupiter (marvosym)
 19769 % U+2644 SATURN; \saturn (wasysym)
 19770 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
 19771 %* \textsaturn -> \Saturn (marvosym)
 19772 % U+2645 URANUS; \uranus (wasysym)
 19773 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
 19774 %* \texturanus -> \Uranus (marvosym)
 19775 % U+2646 NEPTUNE; \neptune (wasysym)
 19776 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
 19777 %* \textneptune -> \Neptune (marvosym)
 19778 % U+2647 PLUTO; \pluto (wasysym)
 19779 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
 19780 %* \textpluto -> \Pluto (marvosym)
 19781 % U+2648 ARIES; \aries (wasysym)
 19782 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19783 %* \textaries -> \Aries (marvosym)
 19784 % U+2649 TAURUS; \taurus (wasysym)
 19785 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19786 %* \texttaurus -> \Taurus (marvosym)
 19787 % U+264A GEMINI; \gemini (wasysym)
 19788 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19789 %* \textgemini -> \Gemini (marvosym)
 19790 % U+264B CANCER; \cancer (wasysym)
 19791 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19792 %* \textcancer -> \Cancer (marvosym)
 19793 % U+264C LEO; \leo (wasysym)
 19794 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19795 %* \textleo -> \Leo (marvosym)
 19796 % U+264D VIRGO; \virgo (wasysym)
 19797 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19798 %* \textvirgo -> \Virgo (marvosym)
 19799 % U+264E LIBRA; \libra (wasysym)
 19800 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19801 %* \textlibra -> \Libra (marvosym)
 19802 % U+264F SCORPIO; \scorpio (wasysym)
 19803 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19804 %* \textscorpio -> \Scorpio (marvosym)
 19805 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19806 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19807 %* \textsagittarius -> \Sagittarius (marvosym)
 19808 % U+2651 CAPRICORN; \capricornus (wasysym)
 19809 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19810 %* \textcapricornus -> \Capricorn (marvosym)
 19811 % U+2652 AQUARIUS; \aquarius (wasysym)
 19812 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19813 %* \textaquarius -> \Aquarius (marvosym)

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19814 % U+2653 PISCES; \pisces (wasysym)
19815 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19816 %* \textpisces -> \Pisces (marvosym)
19817 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19818 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19819 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19820 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19821 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19822 %* \textheartsuitwhite -> \Heart (marvosym)
19823 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19824 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19825 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19826 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19827 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19828 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19829 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19830 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19831 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19832 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19833 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19834 % U+2666 BLACK DIAMOND SUIT; diamond
19835 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19836 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19837 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19838 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19839 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19840 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19841 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19842 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19843 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19844 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19845 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19846 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19847 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19848 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19849 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19850 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19851 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19852 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19853 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19854 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19855 %* \textrecycle -> \Recycling (marvosym)
19856 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19857 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19858 % U+2691 BLACK FLAG; \Flag (ifsym)
19859 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19860 %* \textFlag -> \VarFlag (ifsym)
19861 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19862 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19863 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19864 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19865 %* \textdsmilitary -> \textxswup (fourier)
19866 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19867 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19868 % U+2696 SCALES; \dsjuridical (dictsym)
19869 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696

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19870 % U+2697 ALEMBIC; \dschemical (dictsym)
 19871 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19872 % U+2698 FLOWER; \dsbiological (dictsym)
 19873 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19874 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19875 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19876 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19877 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19878 % U+26A0 WARNING SIGN; \danger (fourier)
 19879 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19880 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19881 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19882 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19883 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19884 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19885 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19886 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19887 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19888 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19889 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19890 % U+26AD MARRIAGE SYMBOL
 19891 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19892 % U+26AE DIVORCE SYMBOL
 19893 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19894 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19895 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19896 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19897 % U+26B9 SEXTILE; \hexstar (wasysym)
 19898 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19899 % U+26BD SOCCER BALL; \Football (marvosym)
 19900 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19901 %* \textSoccerBall -> \Football (marvosym)
 19902 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19903 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19904 % U+26C6 RAIN; \Rain (ifsym)
 19905 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19906 % U+26D4 NO ENTRY; \noway (fourier)
 19907 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19908 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19909 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19910 % U+26FA TENT; \Tent (ifsym)
 19911 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19912 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
 19913 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19914 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19915 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19916 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19917 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19918 %* \textScissorRight -> \RightScissors (marvosym)
 19919 %* \textScissorRight -> \Leftscissors (marvosym)
 19920 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19921 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19922 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19923 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704

19924 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19925 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19926 % U+2707 TAPE DRIVE; \Tape (bbling)
 19927 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19928 % U+2708 AIRPLANE; \Plane (bbling)
 19929 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19930 % U+2709 ENVELOPE; \Envelope (bbling),
 19931 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19932 %* \textEnvelope -> \Letter (marvosym)
 19933 % U+270C VICTORY HAND; \Peace (bbling)
 19934 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19935 % U+270D WRITING HAND; \WritingHand (marvosym)
 19936 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19937 %* \textWritingHand -> \Writinghand (marvosym)
 19938 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbling)
 19939 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19940 % U+270F PENCIL; \PencilRight (bbling)
 19941 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19942 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbling)
 19943 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19944 % U+2711 WHITE NIB; \NibRight (bbling)
 19945 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19946 % U+2712 BLACK NIB; \NibSolidRight (bbling)
 19947 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19948 % U+2713 CHECK MARK; checkmark; \Checkmark (bbling)
 19949 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19950 %* \textCheckmark -> \checkmark (MnSymbol)
 19951 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bbling)
 19952 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19953 % U+2715 MULTIPLICATION X; \XSolid (bbling)
 19954 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19955 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bbling)
 19956 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19957 % U+2717 BALLOT X; \XSolidBrush (bbling)
 19958 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19959 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bbling)
 19960 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19961 % U+271A HEAVY GREEK CROSS; \Plus (bbling)
 19962 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19963 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bbling)
 19964 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19965 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bbling)
 19966 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19967 % U+271D LATIN CROSS; \Cross (bbling)
 19968 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19969 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bbling)
 19970 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19971 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bbling)
 19972 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19973 % U+2720 MALTESE CROSS; \CrossMaltese (bbling)
 19974 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19975 % U+2721 STAR OF DAVID; \DavidStar (bbling)
 19976 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19977 %* \textDavidStar -> \davidstar (wasysym)
 19978 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bbling)
 19979 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19980 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bbling)

19981 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19982 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (b
 dding)
 19983 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19984 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (b
 bding)
 19985 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19986 % U+2726 BLACK FOUR POINTED STAR; \FourStar (b
 bding)
 19987 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19988 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (b
 bding)
 19989 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19990 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (b
 bding)
 19991 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19992 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (b
 bding)
 19993 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19994 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (b
 bding)
 19995 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19996 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (b
 bding)
 19997 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19998 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (b
 bding)
 19999 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 20000 % U+272F PINWHEEL STAR; \FiveStarConvex (b
 bding)
 20001 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 20002 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (b
 bding)
 20003 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 20004 % U+2731 HEAVY ASTERISK; \AsteriskBold (b
 bding)
 20005 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 20006 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (b
 bding)
 20007 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 20008 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (b
 bding)
 20009 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 20010 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (b
 bding)
 20011 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 20012 % U+2736 SIX POINTED BLACK STAR; \SixStar (b
 bding)
 20013 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 20014 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (b
 bding)
 20015 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 20016 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \Eight
 StarBold (b
 bding)
 20017 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 20018 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (b
 bding)
 20019 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 20020 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (b
 bding)
 20021 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 20022 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (b
 bding)
 20023 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 20024 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 20025 % \SixFlowerOpenCenter (b
 bding)
 20026 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 20027 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (b
 bding)
 20028 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 20029 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl
 ternate (b
 bding)
 20030 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 20031 % U+273F BLACK FLORETTE; \FiveFlowerPetal (b
 bding)
 20032 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F

20033 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 20034 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 20035 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 20036 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 20037 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 20038 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 20039 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 20040 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20041 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20042 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 20043 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20044 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20045 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20046 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20047 % U+2747 SPARKLE; \Sparkle (bding)
 20048 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20049 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20050 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20051 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20052 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20053 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20054 % \EightFlowerPetalRemoved (bding)
 20055 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20056 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20057 % \EightAsterisk (bding)
 20058 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20059 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20060 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20061 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20062 % \SquareShadowBottomRight (bding)
 20063 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20064 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20065 % \SquareShadowTopRight (bding)
 20066 \DeclareTextCommand{\textSquareShadowTopRight}{PU}{\9047\120}%* U+2750
 20067 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20068 % \SquareCastShadowBottomRight (bding)
 20069 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20070 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20071 % \SquareCastShadowTopRight (bding)
 20072 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20073 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 20074 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20075 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20076 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20077 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20078 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20079 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20080 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20081 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20082 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20083 % \notperp (mathabx)

20084 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20085 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20086 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20087 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20088 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20089 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20090 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20091 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20092 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20093 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20094 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20095 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20096 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20097 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20098 % \circlearrowleft (AmS)
 20099 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20100 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20101 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20102 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20103 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20104 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20105 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20106 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20107 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20108 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20109 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20110 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 20111 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20112 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20113 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20114 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20115 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20116 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20117 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20118 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20119 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20120 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20121 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20122 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20123 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20124 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20125 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20126 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20127 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20128 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20129 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20130 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20131 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20132 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)

20133 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20134 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20135 % \rcurvearrowne (MnSymbol)
 20136 \DeclareTextCommand{\texttrcurvearrowne}{PU}{\9051\064}%* U+2934
 20137 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20138 % \lcurvearrowse (MnSymbol)
 20139 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20140 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20141 % \lcurvearrowsw (MnSymbol)
 20142 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20143 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20144 % \rcurvearrowse (MnSymbol)
 20145 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
 20146 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20147 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20148 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20149 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20150 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20151 % \rcurvearrowdown (MnSymbol)
 20152 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20153 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20154 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20155 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 20156 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20157 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20158 % \rcurvearrowright (MnSymbol)
 20159 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20160 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 20161 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20162 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 20163 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20164 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20165 % \updownharpoonrightleft (MnSymbol)
 20166 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20167 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20168 % \updownharpoonleftright (MnSymbol)
 20169 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20170 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20171 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20172 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20173 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20174 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20175 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20176 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 20177 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20178 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20179 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20180 % WITH BARB RIGHT; \downdownharpoons (mathabx)

20181 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20182 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20183 % \leftbarharpoon (mathabx)
 20184 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20185 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20186 % LONG DASH; \barleftharpoon (mathabx)
 20187 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20188 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20189 % LONG DASH; \rightbarharpoon (mathabx)
 20190 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20191 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20192 % LONG DASH; \barrightharpoon (mathabx)
 20193 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20194 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20195 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20196 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20197 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20198 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20199 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20200 % U+297F DOWN FISH TAIL
 20201 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20202 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20203 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 20204 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20205 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20206 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20207 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20208 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20209 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20210 %* \textobar -> \textvarobar (stmaryrd)
 20211 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20212 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20213 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20214 %* \textobslash -> \obackslash (mathabx)
 20215 %* \textobslash -> \varobslash (stmaryrd)
 20216 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20217 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20218 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20219 %* \textobot -> \odplus (ulsy)
 20220 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20221 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20222 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20223 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20224 %* \textolessthan -> \varolessthan (stmaryrd)
 20225 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20226 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20227 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20228 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20229 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20230 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20231 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20232 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)

20233 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20234 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20235 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20236 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20237 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20238 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20239 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20240 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20241 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20242 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20243 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20244 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20245 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20246 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20247 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20248 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20249 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20250 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20251 % pxfonts, wasysym)
 20252 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20253 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20254 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20255 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20256 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20257 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20258 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20259 %* \textminusdot -> \divdot (mathabx)
 20260 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20261 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20262 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20263 % \dtimes (mathdesign)
 20264 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20265 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20266 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20267 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20268 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20269 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20270 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20271 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20272 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20273 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20274 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20275 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20276 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20277 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20278 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20279 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20280 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20281 %* \textdoublevee -> \merge (stmaryrd)
 20282 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20283 % \doublebarwedge (AmS)
 20284 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20285 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20286 % \veedoublebar (mahtabx)
 20287 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63

20288 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20289 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20290 % \neqdot (MnSymbol)
 20291 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20292 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20293 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20294 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20295 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20296 % \nleqslant (txfonts/pxfonts)
 20297 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20298 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20299 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20300 % \ngeqslant (txfonts/pxfonts)
 20301 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20302 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20303 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20304 % \nlessapprox (txfonts/pxfonts)
 20305 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20306 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20307 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20308 % \ngtrapprox (txfonts/pxfonts)
 20309 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20310 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20311 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20312 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20313 % \gneq (AmS)
 20314 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20315 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20316 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20317 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20318 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20319 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 20320 % \lesseqgtr (AmS)
 20321 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20322 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 20323 % \gtreqless (AmS)
 20324 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20325 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20326 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20327 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20328 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20329 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20330 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20331 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20332 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20333 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 20334 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20335 % \npreceq (txfonts/pxfonts)
 20336 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20337 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 20338 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20339 % \nsucceq (txfonts/pxfonts)
 20340 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338

20341 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20342 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20343 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20344 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20345 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20346 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20347 % \npreceqq (txfonts/pxfonts)
 20348 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20349 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20350 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20351 % \nsucceqq (txfonts/pxfonts)
 20352 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20353 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20354 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20355 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20356 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20357 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20358 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20359 % \nprecapprox (txfonts/pxfonts)
 20360 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20361 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20362 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20363 % \nsuccapprox (txfonts/pxfonts)
 20364 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20365 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20366 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20367 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20368 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20369 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20370 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20371 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20372 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20373 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20374 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20375 % \nsupseteqq (mathabx)
 20376 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20377 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20378 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20379 %* \textdashV -> \leftVdash (MnSymbol)
 20380 % \ndashV (mathabx)
 20381 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20382 %* \textndashV -> \nleftVdash (MnSymbol)
 20383 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20384 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20385 %* \textDashv -> \leftmodels (MnSymbol)
 20386 % \nDashv (mathabx)
 20387 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20388 %* \textnDashv -> \nleftmodels (MnSymbol)
 20389 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20390 % \DashV (mathabx)
 20391 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20392 %* \textDashV -> \leftModels (MnSymbol)
 20393 % \nDashV (mathabx)

20394 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
20395 %* \textnDashV -> \nleftModels (MnSymbol)
20396 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
20397 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
20398 % \downmodels (MnSymbol)
20399 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
20400 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
20401 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
20402 % \nupmodels (MnSymbol)
20403 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
20404 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
20405 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
20406 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
20407 % \interleave (stmaryrd)
20408 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
20409 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
20410 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
20411 %* \textslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20412 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
20413 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
20414 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
20415 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20416 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
20417 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20418 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
20419 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
20420 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
20421 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
20422 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
20423 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20424 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
20425 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
20426 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
20427 % \textdownstep (tipa)
20428 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20429 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
20430 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
20431 %* \textPUheng -> \textheng (tipx)
20432 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \texthookfour (tipx)
20433 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
20434 %* \textPULhookfour -> \texthookfour (tipx)
20435 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
20436 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
20437 %* \textPUscf -> \textscf (tipx)
20438 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
20439 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
20440 %* \textPUaolig -> \textao lig (tipx)

20441 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20442 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20443 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20444 \DeclareTextCommand{\textcircumlows}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20445 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20446 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20447 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20448 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20449 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20450 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20451 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20452 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20453 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20454 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20455 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20456 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20457 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20458 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20459 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20460 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20461 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20462 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20463 %* \textfullnote -> \Ganz (harmony)
 20464 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20465 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20466 %* \texthalfnote -> \Halb (harmony)
 20467 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20468 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20469 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20470 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20471 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20472 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20473 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20474 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20475 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20476 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20477 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20478 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20479 % U+1F468 MAN; \ManFace (marvosym)
 20480 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20481 % U+1F469 WOMAN; \WomanFace (marvosym)
 20482 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20483 %* \textWomanFace -> \Womanface (marvosym)
 20484 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20485 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20486 %* \textFax -> \Faxmachine (marvosym)
 20487 % U+1F525 FIRE; \Fire (ifsym)
 20488 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20489 % U+1F6B2 BICYCLE; \Bicycle (marvosym)

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20490 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20491 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20492 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20493 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20494 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

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51.2.45 Miscellaneous

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20495 \DeclareTextCommand{\SS}{PU}{SS}%
20496 % \textcopyleft (textcomp)
20497 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20498 % \ccnc (ccllicenses)
20499 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20500 % \ccnd (ccllicenses)
20501 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20502 % \ccsa (ccllicenses)
20503 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20504 % \Info (marvosym, china2e)
20505 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20506 % \CESign (marvosym)
20507 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20508 %* \textCESign -> \CESign (marvosym)

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51.2.46 Aliases

Aliases (german.sty)

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20509 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20510 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20511 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20512 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20513 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20514 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20515 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20516 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

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Aliases (math names)

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20517 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20518 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20519 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20520 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20521 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20522 \</puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20523 (*puvnenc)

20524 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20525 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20526 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20527 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20528 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20529 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20530 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20531 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20532 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20533 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20534 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0

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20535 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
 20536 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20537 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20538 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20539 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20540 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20541 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20542 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20543 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20544 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20545 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20546 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20547 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20548 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20549 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20550 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20551 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20552 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20553 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20554 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20555 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20556 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20557 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20558 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20559 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20560 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20561 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20562 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20563 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20564 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20565 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20566 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20567 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20568 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20569 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20570 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20571 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20572 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20573 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20574 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20575 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20576 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20577 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20578 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20579 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20580 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20581 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20582 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20583 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20584 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20585 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20586 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20587 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20588 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20589 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20590 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20591 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

20592 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20593 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20594 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20595 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20596 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20597 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20598 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20599 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20600 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20601 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20602 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20603 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20604 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20605 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20606 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20607 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20608 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20609 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20610 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20611 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20612 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20613 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20614 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20615 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20616 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20617 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20618 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20619 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20620 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20621 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20622 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20623 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20624 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20625 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20626 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20627 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20628 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20629 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20630 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20631 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20632 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20633 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20634 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20635 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20636 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20637 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20638 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20639 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20640 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20641 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20642 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20643 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20644 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20645 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20646 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20647 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20648 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA

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20649 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20650 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20651 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20652 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20653 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20654 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20655 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20656 </p>puvnc</p>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20657 <*puarenc>
20658 % U+0621;afii57409;ARABIC LETTER HAMZA
20659 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20660 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20661 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20662 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20663 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20664 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20665 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20666 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20667 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20668 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20669 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20670 % U+0627;afii57415;ARABIC LETTER ALEF
20671 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20672 % U+0628;afii57416;ARABIC LETTER BEH
20673 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20674 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20675 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20676 % U+062A;afii57418;ARABIC LETTER TEH
20677 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20678 % U+062B;afii57419;ARABIC LETTER THEH
20679 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20680 % U+062C;afii57420;ARABIC LETTER JEEM
20681 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20682 % U+062D;afii57421;ARABIC LETTER HAH
20683 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20684 % U+062E;afii57422;ARABIC LETTER KHAH
20685 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20686 % U+062F;afii57423;ARABIC LETTER DAL
20687 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20688 % U+0630;afii57424;ARABIC LETTER THAL
20689 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20690 % U+0631;afii57425;ARABIC LETTER REH
20691 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20692 % U+0632;afii57426;ARABIC LETTER ZAIN
20693 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20694 % U+0633;afii57427;ARABIC LETTER SEEN
20695 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20696 % U+0634;afii57428;ARABIC LETTER SHEEN
20697 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20698 % U+0635;afii57429;ARABIC LETTER SAD
20699 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20700 % U+0636;afii57430;ARABIC LETTER DAD

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20701 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20702 % U+0637;afii57431;ARABIC LETTER TAH
 20703 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20704 % U+0638;afii57432;ARABIC LETTER ZAH
 20705 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20706 % U+0639;afii57433;ARABIC LETTER AIN
 20707 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20708 % U+063A;afii57434;ARABIC LETTER GHAIN
 20709 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20710 % U+0640;afii57440;ARABIC TATWEEL
 20711 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20712 % U+0641;afii57441;ARABIC LETTER FEH
 20713 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20714 % U+0642;afii57442;ARABIC LETTER QAF
 20715 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20716 % U+0643;afii57443;ARABIC LETTER KAF
 20717 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20718 % U+0644;afii57444;ARABIC LETTER LAM
 20719 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20720 % U+0645;afii57445;ARABIC LETTER MEEM
 20721 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20722 % U+0646;afii57446;ARABIC LETTER NOON
 20723 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20724 % U+0647;afii57470;ARABIC LETTER HEH
 20725 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20726 % U+0648;afii57448;ARABIC LETTER WAW
 20727 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20728 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20729 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20730 % U+064A;afii57450;ARABIC LETTER YEH
 20731 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20732 % U+064B;afii57451;ARABIC FATHATAN
 20733 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20734 % U+064C;afii57452;ARABIC DAMMATAN
 20735 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20736 % U+064D;afii57453;ARABIC KASRATAN
 20737 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20738 % U+064E;afii57454;ARABIC FATHA
 20739 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20740 % U+064F;afii57455;ARABIC DAMMA
 20741 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20742 % U+0650;afii57456;ARABIC KASRA
 20743 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20744 % U+0651;afii57457;ARABIC SHADDA
 20745 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20746 % U+0652;afii57458;ARABIC SUKUN
 20747 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20748 % U+067E ARABIC LETTER PEH; afii57506
 20749 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20750 % U+0686 ARABIC LETTER TCHEH; afii57507
 20751 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20752 % U+0698 ARABIC LETTER JEH; afii57508
 20753 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20754 % U+06A9 ARABIC LETTER KEHEH
 20755 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

20756 % U+06AF ARABIC LETTER GAF; afi57509
 20757 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20758 % U+06CC ARABIC LETTER FARSI YEH
 20759 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20760 % U+200C ZERO WIDTH NON-JOINER; afi61664
 20761 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20762 % U+200D ZERO WIDTH JOINER; afi301
 20763 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 20764 </puarenc>
 20765 <*psdextra>
 20766 \Hy@VersionCheck{psdextra.def}
 20767 \newcommand*{\psdmapshortnames}{%
 20768 \let\MVPlus\textMVPlus
 20769 \let\MVComma\textMVComma
 20770 \let\MVMinus\textMVMinus
 20771 \let\MVPeriod\textMVPeriod
 20772 \let\MVDivision\textMVDivision
 20773 \let\MVZero\textMVZero
 20774 \let\MVOne\textMVOne
 20775 \let\MVTwo\textMVTwo
 20776 \let\MVThree\textMVThree
 20777 \let\MVFour\textMVFour
 20778 \let\MVFive\textMVFive
 20779 \let\MVSix\textMVSix
 20780 \let\MVSeven\textMVSeven
 20781 \let\MVEight\textMVEight
 20782 \let\MVNine\textMVNine
 20783 \let\MVAt\textMVAt
 20784 \let\copyright\textcopyright
 20785 \let\twosuperior\texttwosuperior
 20786 \let\threesuperior\textthreesuperior
 20787 \let\onesuperior\textonesuperior
 20788 \let\Thorn\textThorn
 20789 \let\thorn\textthorn
 20790 \let\hbar\texthbar
 20791 \let\hausaB\texthausaB
 20792 \let\hausaD\texthausaD
 20793 \let\hausaK\texthausaK
 20794 \let\barl\textbarl
 20795 \let\inve\textinve
 20796 \let\slashc\textslashc
 20797 \let\scripta\textscripta
 20798 \let\openo\textopeno
 20799 \let\rtaild\textrtaild
 20800 \let\reve\textreve
 20801 \let\schwa\textschwa
 20802 \let\niepsilon\textniepsilon
 20803 \let\repsilon\textrepsilon
 20804 \let\rhookrepsilon\texthookrepsilon
 20805 \let\scriptg\textscriptg
 20806 \let\scg\textscg
 20807 \let\ipagamma\textipagamma
 20808 \let\babygamma\textbabygamma
 20809 \let\bari\textbari
 20810 \let\niota\textniota
 20811 \let\sci\textsci

20812 \let\scn\textscn
 20813 \let\niphi\textniphi
 20814 \let\longlegr\textlonglegr
 20815 \let\scr\textscr
 20816 \let\invscr\textinvscr
 20817 \let\esh\textesh
 20818 \let\baru\textbaru
 20819 \let\niupsilon\textniupsilon
 20820 \let\scriptv\textscriptv
 20821 \let\turnv\textturnv
 20822 \let\turnw\textturnw
 20823 \let\turny\textturny
 20824 \let\scy\textscy
 20825 \let\yogh\textyogh
 20826 \let\glotstop\textglotstop
 20827 \let\revglotstop\textrevglotstop
 20828 \let\invglotstop\textinvglotstop
 20829 \let\Gamma\textGamma
 20830 \let\Delta\textDelta
 20831 \let\Theta\textTheta
 20832 \let\Lambda\textLambda
 20833 \let\Xi\textXi
 20834 \let\Pi\textPi
 20835 \let\Sigma\textSigma
 20836 \let\Upsilon\textUpsilon
 20837 \let\Phi\textPhi
 20838 \let\Psi\textPsi
 20839 \let\Omega\textOmega
 20840 \let\alpha\textalpha
 20841 \let\beta\textbeta
 20842 \let\gamma\textgamma
 20843 \let\delta\textdelta
 20844 \let\epsilon\textepsilon
 20845 \let\zeta\textzeta
 20846 \let\eta\texteta
 20847 \let\theta\texttheta
 20848 \let\iota\textiota
 20849 \let\kappa\textkappa
 20850 \let\lambda\textlambda
 20851 \let\mu\textmu
 20852 \let\mugreek\textmugreek
 20853 \let\nu\textnu
 20854 \let\xi\textxi
 20855 \let\pi\textpi
 20856 \let\rho\rho
 20857 \let\varsigma\textvarsigma
 20858 \let\sigma\textsigma
 20859 \let\tau\texttau
 20860 \let\upsilon\textupsilon
 20861 \let\phi\textphi
 20862 \let\chi\textchi
 20863 \let\psi\textpsi
 20864 \let\omega\textomega
 20865 \let\scd\textscd
 20866 \let\scu\textscu
 20867 \let\iinferior\textiinferior
 20868 \let\rinferior\textrinferior

20869 `\let\uinferior\textuinferior`
 20870 `\let\vinferior\textvinferior`
 20871 `\let\betainferior\textbetainferior`
 20872 `\let\gammainferior\textgammainferior`
 20873 `\let\rhoinferior\textrhoinferior`
 20874 `\let\phiinferior\textphiinferior`
 20875 `\let\chiinferior\textchiinferior`
 20876 `\let\barsci\textbarsci`
 20877 `\let\barp\textbarp`
 20878 `\let\barscu\textbarscu`
 20879 `\let\htrtaild\texthtrtaild`
 20880 `\let\dagger\textdagger`
 20881 `\let\bullet\textbullet`
 20882 `\let\hdotfor\texthdotfor`
 20883 `\let\prime\textprime`
 20884 `\let\second\textsecond`
 20885 `\let\third\textthird`
 20886 `\let\backprime\textbackprime`
 20887 `\let\lefttherefore\textlefttherefore`
 20888 `\let\fourth\textfourth`
 20889 `\let\diamonddots\textdiamonddots`
 20890 `\let\zerosuperior\textzerosuperior`
 20891 `\let\isuperior\textisuperior`
 20892 `\let\foursuperior\textfoursuperior`
 20893 `\let\fivesuperior\textfivesuperior`
 20894 `\let\sixsuperior\textsixsuperior`
 20895 `\let\sevensuperior\textsevensuperior`
 20896 `\let\eightsuperior\texteightsuperior`
 20897 `\let\ninesuperior\textninesuperior`
 20898 `\let\plussuperior\textplussuperior`
 20899 `\let\minussuperior\textminussuperior`
 20900 `\let\equalsuperior\textequalsuperior`
 20901 `\let\parenleftsuperior\textparenleftsuperior`
 20902 `\let\parenrightsuperior\textparenrightsuperior`
 20903 `\let\nsuperior\textnsuperior`
 20904 `\let\zeroinferior\textzeroinferior`
 20905 `\let\oneinferior\textoneinferior`
 20906 `\let\twoinferior\texttwoinferior`
 20907 `\let\threeinferior\textthreeinferior`
 20908 `\let\fourinferior\textfourinferior`
 20909 `\let\fiveinferior\textfiveinferior`
 20910 `\let\sixinferior\textsixinferior`
 20911 `\let\seveninferior\textseveninferior`
 20912 `\let\eightinferior\texteightinferior`
 20913 `\let\nineinferior\textnineinferior`
 20914 `\let\plusinferior\textplusinferior`
 20915 `\let\minusinferior\textminusinferior`
 20916 `\let\equalsinferior\textequalsinferior`
 20917 `\let\parenleftinferior\textparenleftinferior`
 20918 `\let\parenrightinferior\textparenrightinferior`
 20919 `\let\ainferior\textainferior`
 20920 `\let\einferior\texteinferior`
 20921 `\let\oinferior\textoinferior`
 20922 `\let\xinferior\textxinferior`
 20923 `\let\schwainferior\textschwainferior`
 20924 `\let\hinferior\texthinferior`
 20925 `\let\kinferior\textkinferior`

20926 \let\linferior\textlinferior
 20927 \let\minferior\textminferior
 20928 \let\ninferior\textninferior
 20929 \let\pinferior\textpinferior
 20930 \let\sinferior\textsinferior
 20931 \let\tinferior\texttinferior
 20932 \let\Deleatur\textDeleatur
 20933 \let\hslash\texthslash
 20934 \let\Im\textIm
 20935 \let\ell\textell
 20936 \let\wp\textwp
 20937 \let\Re\textRe
 20938 \let\mho\textmho
 20939 \let\riota\textriota
 20940 \let\Finv\textFinv
 20941 \let\aleph\textaleph
 20942 \let\beth\textbeth
 20943 \let\gimel\textgimel
 20944 \let\daleth\textdaleth
 20945 \let\xfax\textfax
 20946 \let\Game\textGame
 20947 \let\leftarrow\textleftarrow
 20948 \let\uparrow\textuparrow
 20949 \let\rightarrow\textrightarrow
 20950 \let\downarrow\textdownarrow
 20951 \let\leftrightarrow\textleftrightarrow
 20952 \let\updownarrow\textupdownarrow
 20953 \let\nwarrow\textnwarrow
 20954 \let\nearrow\textnearrow
 20955 \let\searrow\textsearrow
 20956 \let\swarrow\textswarrow
 20957 \let\nleftarrow\textnleftarrow
 20958 \let\nrightarrow\textnrightarrow
 20959 \let\twoheadleftarrow\texttwoheadleftarrow
 20960 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20961 \let\twoheaduparrow\texttwoheaduparrow
 20962 \let\twoheadrightarrow\texttwoheadrightarrow
 20963 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20964 \let\twoheaddownarrow\texttwoheaddownarrow
 20965 \let\leftarrowtail\textleftarrowtail
 20966 \let\rightarrowtail\textrightarrowtail
 20967 \let\mapsto\textmapsto
 20968 \let\hookleftarrow\texthookleftarrow
 20969 \let\hookrightarrow\texthookrightarrow
 20970 \let\looparrowleft\textlooparrowleft
 20971 \let\looparrowright\textlooparrowright
 20972 \let\leftrightharpoonup\textleftrightharpoonup
 20973 \let\lightning\textlightning
 20974 \let\dlsh\textdlsh
 20975 \let\curvearrowleft\textcurvearrowleft
 20976 \let\curvearrowright\textcurvearrowright
 20977 \let\leftharpoonup\textleftharpoonup
 20978 \let\leftharpoondown\textleftharpoondown
 20979 \let\upharpoonright\textupharpoonright
 20980 \let\upharpoonleft\textupharpoonleft
 20981 \let\upharpoonup\textupharpoonup
 20982 \let\upharpoondown\textupharpoondown

20983 $\text{\let\downharpoonright\textdownharpoonright}$
 20984 $\text{\let\downharpoonleft\textdownharpoonleft}$
 20985 $\text{\let\rightleftarrows\textrightleftarrows}$
 20986 $\text{\let\updownarrows\textupdownarrows}$
 20987 $\text{\let\leftrightarrows\textleftrightarrows}$
 20988 $\text{\let\leftleftarrows\textleftleftarrows}$
 20989 $\text{\let\upuparrows\textupuparrows}$
 20990 $\text{\let\righttrightarrows\textrighttrightarrows}$
 20991 $\text{\let\downdownarrows\textdowndownarrows}$
 20992 $\text{\let\leftrightharpoons\textleftrightharpoons}$
 20993 $\text{\let\rightleftharpoons\textrightleftharpoons}$
 20994 $\text{\let\mathrel{\nrightarrow}\textnrightarrow}$
 20995 $\text{\let\mathrel{\nleftarrow}\textnleftarrow}$
 20996 $\text{\let\mathrel{\nrightarrow}\textnrightarrow}$
 20997 $\text{\let\mathrel{\rightarrow}\textrightarrow}$
 20998 $\text{\let\mathrel{\Uparrow}\textUparrow}$
 20999 $\text{\let\mathrel{\rightarrow}\textrightarrow}$
 21000 $\text{\let\mathrel{\Downarrow}\textDownarrow}$
 21001 $\text{\let\mathrel{\Leftrightarrow}\textLeftrightarrow}$
 21002 $\text{\let\mathrel{\Updownarrow}\textUpdownarrow}$
 21003 $\text{\let\mathrel{\nrightarrow}\textnrightarrow}$
 21004 $\text{\let\mathrel{\nearrow}\textnearrow}$
 21005 $\text{\let\mathrel{\searrow}\textsearrow}$
 21006 $\text{\let\mathrel{\swarrow}\textswarrow}$
 21007 $\text{\let\mathrel{\lleftarrow}\textlleftarrow}$
 21008 $\text{\let\mathrel{\rrightarrow}\textrrightarrow}$
 21009 $\text{\let\mathrel{\leftrightsquigarrow}\textleftrightsquigarrow}$
 21010 $\text{\let\mathrel{\rightsquigarrow}\textrightsquigarrow}$
 21011 $\text{\let\mathrel{\dashleftarrow}\textdashleftarrow}$
 21012 $\text{\let\mathrel{\dasheduparrow}\textdasheduparrow}$
 21013 $\text{\let\mathrel{\dashrightarrow}\textdashrightarrow}$
 21014 $\text{\let\mathrel{\dasheddownarrow}\textdasheddownarrow}$
 21015 $\text{\let\mathrel{\pointer}\textpointer}$
 21016 $\text{\let\mathrel{\downuparrows}\textdownuparrows}$
 21017 $\text{\let\mathrel{\leftarrowtriangle}\textleftarrowtriangle}$
 21018 $\text{\let\mathrel{\rightarrowtriangle}\textrightarrowtriangle}$
 21019 $\text{\let\mathrel{\leftrightarrowtriangle}\textleftrightarrowtriangle}$
 21020 $\text{\let\mathrel{\forall}\textforall}$
 21021 $\text{\let\mathrel{\complement}\textcomplement}$
 21022 $\text{\let\mathrel{\partial}\textpartial}$
 21023 $\text{\let\mathrel{\exists}\textexists}$
 21024 $\text{\let\mathrel{\nexists}\textnexists}$
 21025 $\text{\let\mathrel{\emptyset}\textemptyset}$
 21026 $\text{\let\mathrel{\triangle}\texttriangle}$
 21027 $\text{\let\mathrel{\nabla}\textnabla}$
 21028 $\text{\let\mathrel{\in}\textin}$
 21029 $\text{\let\mathrel{\notin}\textnotin}$
 21030 $\text{\let\mathrel{\smallin}\textsmallin}$
 21031 $\text{\let\mathrel{\ni}\textni}$
 21032 $\text{\let\mathrel{\notowner}\textnotowner}$
 21033 $\text{\let\mathrel{\smallowns}\textsmallowns}$
 21034 $\text{\let\mathrel{\prod}\textprod}$
 21035 $\text{\let\mathrel{\amalg}\textamalg}$
 21036 $\text{\let\mathrel{\sum}\textsum}$
 21037 $\text{\let\mathrel{\mp}\textmp}$
 21038 $\text{\let\mathrel{\dotplus}\textdotplus}$
 21039 $\text{\let\mathrel{\Divides}\textDivides}$

21040 `\let\DividesNot\textDividesNot`
 21041 `\let\setminus\textsetminus`
 21042 `\let\ast\textast`
 21043 `\let\circ\textcirc`
 21044 `\let\surd\textsqrt`
 21045 `\let\propto\textpropto`
 21046 `\let\infty\textinfty`
 21047 `\let\angle\textangle`
 21048 `\let\measuredangle\textmeasuredangle`
 21049 `\let\sphericalangle\textsphericalangle`
 21050 `\let\mid\textmid`
 21051 `\let\nmid\textnmid`
 21052 `\let\parallel\textparallel`
 21053 `\let\nparallel\textnparallel`
 21054 `\let\wedge\textwedge`
 21055 `\let\owedge\textowedge`
 21056 `\let\vee\textvee`
 21057 `\let\ovee\textovee`
 21058 `\let\cap\textcap`
 21059 `\let\cup\textcup`
 21060 `\let\int\textint`
 21061 `\let\iint\textiint`
 21062 `\let\iiint\textiiint`
 21063 `\let\oint\textoint`
 21064 `\let\oiint\textoiint`
 21065 `\let\ointclockwise\textointclockwise`
 21066 `\let\ointctrlockwise\textointctrlockwise`
 21067 `\let\therefore\texttherefore`
 21068 `\let\because\textbecause`
 21069 `\let\vdots\textvdots`
 21070 `\let\squaredots\textsquaredots`
 21071 `\let\dotminus\textdotminus`
 21072 `\let\eqcolon\texteqcolon`
 21073 `\let\sim\textsim`
 21074 `\let\backsim\textbacksim`
 21075 `\let\nbacksim\textnbacksim`
 21076 `\let\wr\textwr`
 21077 `\let\sim\textsim`
 21078 `\let\eqsim\texteqsim`
 21079 `\let\neqsim\textneqsim`
 21080 `\let\simeq\textsimeq`
 21081 `\let\nsimeq\textnsimeq`
 21082 `\let\cong\textcong`
 21083 `\let\ncong\textncong`
 21084 `\let\approx\textapprox`
 21085 `\let\napprox\textnapprox`
 21086 `\let\approxeq\textapproxeq`
 21087 `\let\napproxeq\textnapproxeq`
 21088 `\let\triplesim\texttriplesim`
 21089 `\let\ntriplesim\textntriplesim`
 21090 `\let\backcong\textbackcong`
 21091 `\let\nbackcong\textnbackcong`
 21092 `\let\asymp\textasymp`
 21093 `\let\nasymp\textnasymp`
 21094 `\let\Bumpeq\textBumpeq`
 21095 `\let\NBumpeq\textNBumpeq`
 21096 `\let\bumpeq\textbumpeq`

21097 \let\nbumpeq\textnbumpeq
 21098 \let\doteq\textdoteq
 21099 \let\ndoteq\textndoteq
 21100 \let\doteqdot\textdoteqdot
 21101 \let\NDoteq\textNDotseq
 21102 \let\fallingdoteq\textfallingdoteq
 21103 \let\fallingdoteq\textnfallingdoteq
 21104 \let\risingdoteq\textrisingdoteq
 21105 \let\risingdoteq\textnrisingdoteq
 21106 \let\colonequals\textcolonequals
 21107 \let\equalscolon\textequalscolon
 21108 \let\eqcirc\texteqcirc
 21109 \let\neqcirc\textneqcirc
 21110 \let\circeq\textcirceq
 21111 \let\ncirceq\textncirceq
 21112 \let\hateq\texthateq
 21113 \let\nhateq\textnhateq
 21114 \let\triangleeq\texttriangleeq
 21115 \let\neq\textneq
 21116 \let\ne\textne
 21117 \let\equiv\textequiv
 21118 \let\nequiv\textnequiv
 21119 \let\leq\textleq
 21120 \let\le\textle
 21121 \let\geq\textgeq
 21122 \let\ge\textge
 21123 \let\leqq\textleqq
 21124 \let\leqq\textnleqq
 21125 \let\geqq\textgeqq
 21126 \let\geqq\textngeqq
 21127 \let\lneqq\textlneqq
 21128 \let\gneqq\textgneqq
 21129 \let\ll\textll
 21130 \let\nll\textnll
 21131 \let\gg\textgg
 21132 \let\ngg\textngg
 21133 \let\between\textbetween
 21134 \let\nless\textnless
 21135 \let\ngtr\textngtr
 21136 \let\leq\textnleq
 21137 \let\ngtr\textngeq
 21138 \let\lesssim\textlessim
 21139 \let\gtrsim\textgtrsim
 21140 \let\nlessim\textnlessim
 21141 \let\ngtrsim\textngtrsim
 21142 \let\lessgtr\textlessgtr
 21143 \let\gtrless\textgtrless
 21144 \let\ngtrless\textngtrless
 21145 \let\nlessgtr\textnlessgtr
 21146 \let\prec\textprec
 21147 \let\succ\textsucc
 21148 \let\preccurlyeq\textpreccurlyeq
 21149 \let\succcurlyeq\textsucccurlyeq
 21150 \let\precsim\textprecsim
 21151 \let\precsim\textnprecsim
 21152 \let\succsim\textsuccsim
 21153 \let\succsim\textnsuccsim

21154 `\let\nprec\textnprec`
 21155 `\let\nsucc\textnsucc`
 21156 `\let\subset\textsubset`
 21157 `\let\supset\textsupset`
 21158 `\let\nsubset\textnsubset`
 21159 `\let\nsupset\textnsupset`
 21160 `\let\subseteq\textsubseteq`
 21161 `\let\supseteq\textsupseteq`
 21162 `\let\nsubseteq\textnsubseq`
 21163 `\let\nsupseteq\textnsupseteq`
 21164 `\let\subsetneq\textsubsetneq`
 21165 `\let\supsetneq\textsupsetneq`
 21166 `\let\cupdot\textcupdot`
 21167 `\let\cupplus\textcupplus`
 21168 `\let\sqsubset\textsqsubset`
 21169 `\let\nsqsubset\textnsqsubset`
 21170 `\let\sqsupset\textsqsupset`
 21171 `\let\nsqsupset\textnsqsupset`
 21172 `\let\sqsubseq\textsqsubseq`
 21173 `\let\nsqsubseq\textnsqsubseq`
 21174 `\let\sqsupseq\textsqsupseq`
 21175 `\let\nsqsupseq\textnsqsupseq`
 21176 `\let\sqcap\textsqcap`
 21177 `\let\sqcup\textsqcup`
 21178 `\let\oplus\textoplus`
 21179 `\let\ominus\textominus`
 21180 `\let\otimes\textotimes`
 21181 `\let\oslash\textoslash`
 21182 `\let\odot\textodot`
 21183 `\let\circledcirc\textcircledcirc`
 21184 `\let\circledast\textcircledast`
 21185 `\let\circleddash\textcircleddash`
 21186 `\let\boxplus\textboxplus`
 21187 `\let\boxminus\textboxminus`
 21188 `\let\boxtimes\textboxtimes`
 21189 `\let\boxdot\textboxdot`
 21190 `\let\vdash\textvdash`
 21191 `\let\dashv\textdashv`
 21192 `\let\ndashv\textndashv`
 21193 `\let\top\texttop`
 21194 `\let\ndownvdash\textndownvdash`
 21195 `\let\bot\textbot`
 21196 `\let\nupvdash\textnupvdash`
 21197 `\let\vDash\textvDash`
 21198 `\let\Vdash\textVdash`
 21199 `\let\Vvdash\textVvdash`
 21200 `\let\nVdash\textnVdash`
 21201 `\let\VDash\textVDash`
 21202 `\let\nvdash\textnvdash`
 21203 `\let\nvDash\textnvDash`
 21204 `\let\nVdash\textnVdash`
 21205 `\let\nVDash\textnVDash`
 21206 `\let\lhd\textlhd`
 21207 `\let\rhd\textrhd`
 21208 `\let\unlhd\textunlhd`
 21209 `\let\unrhd\textunrhd`
 21210 `\let\multimapdotbothA\textmultimapdotbothA`

21211 `\let\multimapdotbothB\textmultimapdotbothB`
 21212 `\let\multimap\textmultimap`
 21213 `\let\veebar\textveebar`
 21214 `\let\barwedge\textbarwedge`
 21215 `\let\star\textstar`
 21216 `\let\divideontimes\textdivideontimes`
 21217 `\let\bowtie\textbowtie`
 21218 `\let\ltimes\textltimes`
 21219 `\let\rtimes\textrtimes`
 21220 `\let\leftthreetimes\textleftthreetimes`
 21221 `\let\rightthreetimes\textrightthreetimes`
 21222 `\let\backsimeq\textbacksimeq`
 21223 `\let\nbacksimeq\textnbacksimeq`
 21224 `\let\curlyvee\textcurlyvee`
 21225 `\let\curlywedge\textcurlywedge`
 21226 `\let\Subset\textSubset`
 21227 `\let\nSubset\textnSubset`
 21228 `\let\Supset\textSupset`
 21229 `\let\nSupset\textnSupset`
 21230 `\let\Cap\textCap`
 21231 `\let\Cup\textCup`
 21232 `\let\pitchfork\textpitchfork`
 21233 `\let\lessdot\textlessdot`
 21234 `\let\gtrdot\textgtrdot`
 21235 `\let\lll\textlll`
 21236 `\let\ggg\textggg`
 21237 `\let\lesseqgtr\textlesseqgtr`
 21238 `\let\gtreqless\textgtreqless`
 21239 `\let\curlyeqprec\textcurlyeqprec`
 21240 `\let\ncurlyeqprec\textncurlyeqprec`
 21241 `\let\curlyeqsucc\textcurlyeqsucc`
 21242 `\let\ncurlyeqsucc\textncurlyeqsucc`
 21243 `\let\npreccurlyeq\textnpreccurlyeq`
 21244 `\let\nsucccurlyeq\textnsucccurlyeq`
 21245 `\let\nqsubseteq\textnqsubseteq`
 21246 `\let\nqsupseteq\textnqsupseteq`
 21247 `\let\sqsubsetneq\textsqsubsetneq`
 21248 `\let\sqsupsetneq\textsqsupsetneq`
 21249 `\let\lnsim\textlnsim`
 21250 `\let\gnsim\textgnsim`
 21251 `\let\precnsim\textprecnsim`
 21252 `\let\succnsim\textsuccnsim`
 21253 `\let\ntriangleleft\textntriangleleft`
 21254 `\let\ntriangleright\textntriangleright`
 21255 `\let\ntrianglelefteq\textntrianglelefteq`
 21256 `\let\ntrianglerighteq\textntrianglerighteq`
 21257 `\let\vdots\textvdots`
 21258 `\let\cdots\textcdots`
 21259 `\let\udots\textudots`
 21260 `\let\ddots\textddots`
 21261 `\let\barin\textbarin`
 21262 `\let\diameter\textdiameter`
 21263 `\let\backneg\textbackneg`
 21264 `\let\wasylounge\textwasylounge`
 21265 `\let\invbackneg\textinvbackneg`
 21266 `\let\clock\textclock`
 21267 `\let\ulcorner\textulcorner`

21268 \let\urcorner\texturcorner
 21269 \let\llcorner\textllcorner
 21270 \let\lrcorner\textlrcorner
 21271 \let\frown\textfrown
 21272 \let\smile\textsmile
 21273 \let\Keyboard\textKeyboard
 21274 \let\langle\textlangle
 21275 \let\rangle\textrangle
 21276 \let\APLinv\textAPLinv
 21277 \let\Tumbler\textTumbler
 21278 \let\notslash\textnotslash
 21279 \let\notbackslash\textnotbackslash
 21280 \let\boxbackslash\textboxbackslash
 21281 \let\APLleftarrowbox\textAPLleftarrowbox
 21282 \let\APLrightarrowbox\textAPLrightarrowbox
 21283 \let\APLuparrowbox\textAPLuparrowbox
 21284 \let\APLdownarrowbox\textAPLdownarrowbox
 21285 \let\APLinput\textAPLinput
 21286 \let\Request\textRequest
 21287 \let\Beam\textBeam
 21288 \let\hexagon\texthexagon
 21289 \let\APLbox\textAPLbox
 21290 \let\ForwardToIndex\textForwardToIndex
 21291 \let\RewindToIndex\textRewindToIndex
 21292 \let\bbslash\textbbslash
 21293 \let\CircledA\textCircledA
 21294 \let\CleaningF\textCleaningF
 21295 \let\CleaningFF\textCleaningFF
 21296 \let\CleaningP\textCleaningP
 21297 \let\CleaningPP\textCleaningPP
 21298 \let\CuttingLine\textCuttingLine
 21299 \let\UParrow\textUParrow
 21300 \let\bigtriangleup\textbigtriangleup
 21301 \let\Forward\textForward
 21302 \let\triangleright\texttriangleright
 21303 \let\RHD\textRHD
 21304 \let\DOWNarrow\textDOWNarrow
 21305 \let\bigtriangledown\textbigtriangledown
 21306 \let\Rewind\textRewind
 21307 \let\triangleleft\texttriangleleft
 21308 \let\LHD\textLHD
 21309 \let\diamond\textdiamond
 21310 \let\lozenge\textlozenge
 21311 \let\LEFTCIRCLE\textLEFTCIRCLE
 21312 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21313 \let\openbullet\textopenbullet
 21314 \let\boxbar\textboxbar
 21315 \let\bigcircle\textbigcircle
 21316 \let\Cloud\textCloud
 21317 \let\FiveStar\textFiveStar
 21318 \let\FiveStarOpen\textFiveStarOpen
 21319 \let\Phone\textPhone
 21320 \let\boxempty\textboxempty
 21321 \let\Checkedbox\textCheckedbox
 21322 \let\Crossedbox\textCrossedbox
 21323 \let\Coffeecup\textCoffeecup
 21324 \let\HandCuffLeft\textHandCuffLeft

21325 \let\HandCuffRight\textHandCuffRight
 21326 \let\HandLeft\textHandLeft
 21327 \let\HandRight\textHandRight
 21328 \let\Radioactivity\textRadioactivity
 21329 \let\Biohazard\textBiohazard
 21330 \let\Ankh\textAnkh
 21331 \let\YinYang\textYinYang
 21332 \let\frownie\textfrownie
 21333 \let\smiley\textsmiley
 21334 \let\blacksmiley\textblacksmiley
 21335 \let\sun\textsun
 21336 \let\leftmoon\textleftmoon
 21337 \let\rightmoon\textrightmoon
 21338 \let\mercury\textmercury
 21339 \let\earth\textearth
 21340 \let\male\textmale
 21341 \let\jupiter\textjupiter
 21342 \let\saturn\textsaturn
 21343 \let\uranus\texturanus
 21344 \let\neptune\textneptune
 21345 \let\pluto\textpluto
 21346 \let\aries\textaries
 21347 \let\taurus\texttaurus
 21348 \let\gemini\textgemini
 21349 \let\cancer\textcancer
 21350 \let\leo\textleo
 21351 \let\virgo\textvirgo
 21352 \let\libra\textlibra
 21353 \let\scorpio\textscorpio
 21354 \let\sagittarius\textsagittarius
 21355 \let\capricornus\textcapricornus
 21356 \let\aquarius\textaquarius
 21357 \let\pisces\textpisces
 21358 \let\quarternote\textquarternote
 21359 \let\twonotes\texttwonotes
 21360 \let\sixteenthnote\textsixteenthnote
 21361 \let\flat\textflat
 21362 \let\natural\textnatural
 21363 \let\sharp\textsharp
 21364 \let\recycle\textrecycle
 21365 \let\Wheelchair\textWheelchair
 21366 \let\Flag\textFlag
 21367 \let\MineSign\textMineSign
 21368 \let\ds\textds
 21369 \let\ds\textds
 21370 \let\ds\textds
 21371 \let\ds\textds
 21372 \let\ds\textds
 21373 \let\ds\textds
 21374 \let\manstar\textmanstar
 21375 \let\danger\textdanger
 21376 \let\FemaleFemale\textFemaleFemale
 21377 \let\MaleMale\textMaleMale
 21378 \let\FemaleMale\textFemaleMale
 21379 \let\Hermaphrodite\textHermaphrodite
 21380 \let\Neutral\textNeutral
 21381 \let\hexstar\texthexstar

21382 \let\SunCloud\textSunCloud
 21383 \let\Rain\textRain
 21384 \let\noway\textnoway
 21385 \let\Mountain\textMountain
 21386 \let\Tent\textTent
 21387 \let\ScissorRight\textScissorRight
 21388 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21389 \let\ScissorHollowRight\textScissorHollowRight
 21390 \let\PhoneHandset\textPhoneHandset
 21391 \let\Tape\textTape
 21392 \let\Plane\textPlane
 21393 \let\Envelope\textEnvelope
 21394 \let\Peace\textPeace
 21395 \let\WritingHand\textWritingHand
 21396 \let\PencilRightDown\textPencilRightDown
 21397 \let\PencilRight\textPencilRight
 21398 \let\PencilRightUp\textPencilRightUp
 21399 \let\NibRight\textNibRight
 21400 \let\NibSolidRight\textNibSolidRight
 21401 \let\Checkmark\textCheckmark
 21402 \let\CheckmarkBold\textCheckmarkBold
 21403 \let\XSolid\textXSolid
 21404 \let\XSolidBold\textXSolidBold
 21405 \let\XSolidBrush\textXSolidBrush
 21406 \let\PlusOutline\textPlusOutline
 21407 \let\Plus\textPlus
 21408 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21409 \let\PlusCenterOpen\textPlusCenterOpen
 21410 \let\Cross\textCross
 21411 \let\CrossOpenShadow\textCrossOpenShadow
 21412 \let\CrossOutline\textCrossOutline
 21413 \let\CrossMaltese\textCrossMaltese
 21414 \let\DavidStar\textDavidStar
 21415 \let\FourAsterisk\textFourAsterisk
 21416 \let\JackStar\textJackStar
 21417 \let\JackStarBold\textJackStarBold
 21418 \let\ClowerTips\textClowerTips
 21419 \let\FourStar\textFourStar
 21420 \let\FourStarOpen\textFourStarOpen
 21421 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21422 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21423 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21424 \let\FiveStarOutline\textFiveStarOutline
 21425 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21426 \let\FiveStarConvex\textFiveStarConvex
 21427 \let\FiveStarShadow\textFiveStarShadow
 21428 \let\AsteriskBold\textAsteriskBold
 21429 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21430 \let\EightStarTaper\textEightStarTaper
 21431 \let\EightStarConvex\textEightStarConvex
 21432 \let\SixStar\textSixStar
 21433 \let\EightStar\textEightStar
 21434 \let\EightStarBold\textEightStarBold
 21435 \let\TwelveStar\textTwelveStar
 21436 \let\SixteenStarLight\textSixteenStarLight
 21437 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21438 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter

21439 \let\Asterisk\textAsterisk
 21440 \let\SixFlowerAlternate\textSixFlowerAlternate
 21441 \let\FiveFlowerPetal\textFiveFlowerPetal
 21442 \let\FiveFlowerOpen\textFiveFlowerOpen
 21443 \let\EightFlowerPetal\textEightFlowerPetal
 21444 \let\SunshineOpenCircled\textSunshineOpenCircled
 21445 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21446 \let\SnowflakeChevron\textSnowflakeChevron
 21447 \let\Snowflake\textSnowflake
 21448 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21449 \let\Sparkle\textSparkle
 21450 \let\SparkleBold\textSparkleBold
 21451 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21452 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21453 \let\EightAsterisk\textEightAsterisk
 21454 \let\CircleShadow\textCircleShadow
 21455 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21456 \let\SquareTopRight\textSquareTopRight
 21457 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21458 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21459 \let\DiamandSolid\textDiamandSolid
 21460 \let\RectangleThin\textRectangleThin
 21461 \let\Rectangle\textRectangle
 21462 \let\RectangleBold\textRectangleBold
 21463 \let\perp\textperp
 21464 \let\notperp\textnotperp
 21465 \let\veedot\textveedot
 21466 \let\wedgedot\textwedgedot
 21467 \let\leftspoon\textleftspoon
 21468 \let\lbrackdbl\textlbrackdbl
 21469 \let\rbrackdbl\textrbrackdbl
 21470 \let\circlearrowleft\textcirclearrowleft
 21471 \let\circlearrowright\textcirclearrowright
 21472 \let\longleftarrow\textlongleftarrow
 21473 \let\longrightarrow\textlongrightarrow
 21474 \let\longleftarrow\textlongleftarrow
 21475 \let\Longleftarrow\textLongleftarrow
 21476 \let\Longrightarrow\textLongrightarrow
 21477 \let\Longleftarrow\textLongleftarrow
 21478 \let\longmapsto\textlongmapsto
 21479 \let\Longmapsfrom\textLongmapsfrom
 21480 \let\Longmapsto\textLongmapsto
 21481 \let\nwsearrow\textnwsearrow
 21482 \let\neswarrow\textneswarrow
 21483 \let\lhooknarrow\textlhooknarrow
 21484 \let\rhooknarrow\texthooknarrow
 21485 \let\lhooksearrow\textlhooksearrow
 21486 \let\rhooksearrow\texthooksearrow
 21487 \let\leadsto\textleadsto
 21488 \let\rcurvearrowne\textrcurvearrowne
 21489 \let\lcurvearrowse\textlcurvearrowse
 21490 \let\lcurvearrowsw\textlcurvearrowsw
 21491 \let\rcurvearrowse\textrcurvearrowse
 21492 \let\lcurvearrowdown\textlcurvearrowdown
 21493 \let\rcurvearrowdown\textrcurvearrowdown
 21494 \let\rcurvearrowleft\textrcurvearrowleft
 21495 \let\rcurvearrowright\textrcurvearrowright

21496 `\let\leftrightharpoon\textleftrightharpoon`
 21497 `\let\rightleftharpoon\textrightleftharpoon`
 21498 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 21499 `\let\updownharpoonleftright\textupdownharpoonleftright`
 21500 `\let\leftleftharpoons\textleftleftharpoons`
 21501 `\let\upupharpoons\textupupharpoons`
 21502 `\let\righttrightharpoons\textrighttrightharpoons`
 21503 `\let\downdownharpoons\textdowndownharpoons`
 21504 `\let\leftbarharpoon\textleftbarharpoon`
 21505 `\let\barleftharpoon\textbarleftharpoon`
 21506 `\let\rightbarharpoon\textrightbarharpoon`
 21507 `\let\barrightharpoon\textbarrightharpoon`
 21508 `\let\updownharpoons\textupdownharpoons`
 21509 `\let\downupharpoons\textdownupharpoons`
 21510 `\let\moo\textmoo`
 21511 `\let\llparenthesis\textllparenthesis`
 21512 `\let\rrparenthesis\textrrparenthesis`
 21513 `\let\invdiameter\textinvdiameter`
 21514 `\let\obar\textobar`
 21515 `\let\obslash\textobslash`
 21516 `\let\obot\textobot`
 21517 `\let\NoChemicalCleaning\textNoChemicalCleaning`
 21518 `\let\olessthan\textolessthan`
 21519 `\let\ogreaterthan\textogreaterthan`
 21520 `\let\boxslash\textboxslash`
 21521 `\let\boxbslash\textboxbslash`
 21522 `\let\boxast\textboxast`
 21523 `\let\boxcircle\textboxcircle`
 21524 `\let\boxbox\textboxbox`
 21525 `\let\Valve\textValve`
 21526 `\let\multimapboth\textmultimapboth`
 21527 `\let\shuffle\textshuffle`
 21528 `\let\uplus\textuplus`
 21529 `\let\bigdoublewedge\textbigdoublewedge`
 21530 `\let\bigdoublevee\textbigdoublevee`
 21531 `\let\Join\textJoin`
 21532 `\let\fatsemi\textfatsemi`
 21533 `\let\circplus\textcircplus`
 21534 `\let\minusdot\textminusdot`
 21535 `\let\dottimes\textdottimes`
 21536 `\let\dtimes\textdtimes`
 21537 `\let\odiv\textodiv`
 21538 `\let\invneg\textinvneg`
 21539 `\let\squdoublecap\textsqudoublecap`
 21540 `\let\capdot\textcapdot`
 21541 `\let\squdoublecup\textsqudoublecup`
 21542 `\let\doublewedge\textdoublewedge`
 21543 `\let\doublevee\textdoublevee`
 21544 `\let\doublebarwedge\textdoublebarwedge`
 21545 `\let\veedoublebar\textveedoublebar`
 21546 `\let\eqdot\texteqdot`
 21547 `\let\neqdot\textneqdot`
 21548 `\let\coloncolonequals\textcoloncolonequals`
 21549 `\let\leqslant\textleqslant`
 21550 `\let\neqslant\textneqslant`
 21551 `\let\geqslant\textgeqslant`
 21552 `\let\ngeqslant\textngeqslant`

21553 \let\lessapprox\textlessapprox
 21554 \let\nlessapprox\textnlessapprox
 21555 \let\gtrapprox\textgtrapprox
 21556 \let\ngtrapprox\textngtrapprox
 21557 \let\lneq\textlneq
 21558 \let\gneq\textgneq
 21559 \let\lnapprox\textlnapprox
 21560 \let\gnapprox\textgnapprox
 21561 \let\lesseqqgtr\textlesseqqgtr
 21562 \let\gtreqqless\textgtreqqless
 21563 \let\eqslantless\texteqslantless
 21564 \let\eqslantgtr\texteqslantgtr
 21565 \let\leftslice\textleftslice
 21566 \let\rightslice\textright slice
 21567 \let\preceq\textpreceq
 21568 \let\npreceq\textnpreceq
 21569 \let\succeq\textsucceq
 21570 \let\nsucceq\textnsucceq
 21571 \let\precneq\textprecneq
 21572 \let\succneq\textsuccneq
 21573 \let\preceqq\textpreceqq
 21574 \let\npreceqq\textnpreceqq
 21575 \let\succeqq\textsucceqq
 21576 \let\nsucceqq\textnsucceqq
 21577 \let\precneqq\textprecneqq
 21578 \let\succneqq\textsuccneqq
 21579 \let\precapprox\textprecapprox
 21580 \let\nprecapprox\textnprecapprox
 21581 \let\succapprox\textsuccapprox
 21582 \let\nsuccapprox\textnsuccapprox
 21583 \let\precnapprox\textprecnapprox
 21584 \let\succnapprox\textsuccnapprox
 21585 \let\subseteqq\textsubseteqq
 21586 \let\nsubseteqq\textnsubseteqq
 21587 \let\supseteqq\textsupseteqq
 21588 \let\nsupseteqq\textnsupseteqq
 21589 \let\dashV\textdashV
 21590 \let\ndashV\textndashV
 21591 \let\Dashv\textDashv
 21592 \let\ndashv\textndashv
 21593 \let\DashV\textDashV
 21594 \let\ndashV\textndashV
 21595 \let\downmodels\textdownmodels
 21596 \let\ndownmodels\textndownmodels
 21597 \let\upmodels\textupmodels
 21598 \let\nupmodels\textnupmodels
 21599 \let\upspoon\textupspoon
 21600 \let\interleave\textinterleave
 21601 \let\slash\textslash
 21602 \let\pentagon\textpentagon
 21603 \let\varhexagon\textvarhexagon
 21604 \let\jinferior\textjinferior
 21605 \let\slashdiv\textslashdiv
 21606 \let\fivedots\textfivedots
 21607 \let\oo\textoo
 21608 \let\GaPa\textGaPa
 21609 \let\HaPa\textHaPa

```

21610 \let\ViPa\textViPa
21611 \let\AcPa\textAcPa
21612 \let\SePa\textSePa
21613 \let\ZwPa\textZwPa
21614 \let\fullnote\textfullnote
21615 \let\halfnote\texthalfnote
21616 \let\Vier\textVier
21617 \let\Acht\textAcht
21618 \let\Sech\textSech
21619 \let\Zwdr\textZwdr
21620 \let\Mundus\textMundus
21621 \let\Moon\textMoon
21622 \let\ManFace\textManFace
21623 \let\WomanFace\textWomanFace
21624 \let\Fax\textFax
21625 \let\Fire\textFire
21626 \let\Bicycle\textBicycle
21627 \let\Gentsroom\textGentsroom
21628 \let\Ladiesroom\textLadiesroom
21629 \let\ccnc\textccnc
21630 \let\ccsa\textccsa
21631 \let\Info\textInfo
21632 \let\CESign\textCESign
21633 \let\neg\textneg
21634 \let\times\texttimes
21635 \let\div\textdiv
21636 \let\pm\textpm
21637 \let\cdot\textcdot
21638 }% \psdmapshortnames
21639 \newcommand*{\psdaliasnames}{%
21640 \let\epsdice\HyPsd@DieFace
21641 \let\fcdice\HyPsd@DieFace
21642 \let\MoonPha\HyPsd@MoonPha
21643 \let\mathdollar\textdollar
21644 \let\EyesDollar\textdollar
21645 \let\binampersand\textampersand
21646 \let\with\textampersand
21647 \let\mathunderscore\textunderscore
21648 \let\textvertline\textbar
21649 \let\mathsterling\textsterling
21650 \let\pounds\textsterling
21651 \let\brokenvert\textbrokenbar
21652 \let\mathsection\textsection
21653 \let\S\textsection
21654 \let\mathparagraph\textparagraph
21655 \let\MultiplicationDot\textperiodcentered
21656 \let\Squaredot\textperiodcentered
21657 \let\vartimes\textmultiply
21658 \let\MVMultiplication\textmultiply
21659 \let\eth\dh
21660 \let\crossd\textcrd
21661 \let\textbard\textcrd
21662 \let\bard\textcrd
21663 \let\textcrh\textthbar
21664 \let\crossh\textthbar
21665 \let\planck\textthbar
21666 \let\eng\ng

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21667 \let\engma\ng
 21668 \let\crossb\textcrb
 21669 \let\textbarb\textcrb
 21670 \let\barb\textcrb
 21671 \let\Florin\textflorin
 21672 \let\hv\texthvlig
 21673 \let\hausak\texthtk
 21674 \let\crossnilambda\textcrlambda
 21675 \let\barlambda\textcrlambda
 21676 \let\lambdabar\textcrlambda
 21677 \let\lambdaslash\textcrlambda
 21678 \let\textnrleg\textPUnrleg
 21679 \let\textpipevar\textpipe
 21680 \let\textdoublepipevar\textdoublepipe
 21681 \let\textdoublebarpipevar\textdoublebarpipe
 21682 \let\textcrg\textgslash
 21683 \let\textdblig\textPUdblig
 21684 \let\textqplig\textPUqplig
 21685 \let\textcentoldstyle\textslashc
 21686 \let\textbarc\textslashc
 21687 \let\inva\textturna
 21688 \let\vara\textscripta
 21689 \let\invscripta\textturnscripta
 21690 \let\rotvara\textturnscripta
 21691 \let\hookb\texthtb
 21692 \let\hausab\texthtb
 21693 \let\varopeno\textopeno
 21694 \let\curlyc\textctc
 21695 \let\taild\textrtaild
 21696 \let\hookd\texthtd
 21697 \let\hausad\texthtd
 21698 \let\er\textrhooschwa
 21699 \let\epsi\textniepsilon
 21700 \let\hookrepsilon\textrhooschwa
 21701 \let\closedrepsilon\textcloserepsilon
 21702 \let\barj\textbardotlessj
 21703 \let\hookg\texthtg
 21704 \let\varg\textscriptg
 21705 \let\vod\textipagamma
 21706 \let\invh\textturnh
 21707 \let\udesc\textturnh
 21708 \let\hookh\texthth
 21709 \let\voicedh\texthth
 21710 \let\hookheng\texththeng
 21711 \let\ibar\textbari
 21712 \let\vari\textniota
 21713 \let\tildel\textltilde
 21714 \let\latfric\textbeltl
 21715 \let\tail\textrtail
 21716 \let\lz\textlyoghlig
 21717 \let\invm\textturnm
 21718 \let\rotm\textturnm
 21719 \let\legm\textturnmrleg
 21720 \let\labdentals\textltailm
 21721 \let\emgma\textltailm
 21722 \let\nj\textltailn
 21723 \let\enya\textltailn

21724 \let\tailn\textrtailn
 21725 \let\closedniomega\textcloseomega
 21726 \let\varomega\textcloseomega
 21727 \let\invr\textturnr
 21728 \let\rotr\textturnr
 21729 \let\invlegr\textturnlonglegr
 21730 \let\tailinvr\textturnrrtail
 21731 \let\legr\textlonglegr
 21732 \let\tailr\textrtailr
 21733 \let\flapr\textfishhookr
 21734 \let\flap\textfishhookr
 21735 \let\tails\textrtails
 21736 \let\curlyesh\textctesh
 21737 \let\clickt\textturnt
 21738 \let\tailt\textrtailt
 21739 \let\ubar\textbaru
 21740 \let\rotOmega\textniupsilon
 21741 \let\invv\textturnv
 21742 \let\pwedge\textturnv
 21743 \let\invw\textturnw
 21744 \let\rotw\textturnw
 21745 \let\invy\textturny
 21746 \let\roty\textturny
 21747 \let\tailz\textrtailz
 21748 \let\curlyz\textctz
 21749 \let\curlyyogh\textctyogh
 21750 \let\ejective\textglotstop
 21751 \let\glottal\textglotstop
 21752 \let\reveject\textrevglotstop
 21753 \let\clickc\textstretchc
 21754 \let\textstretchcvar\textstretchc
 21755 \let\clickb\textbullseye
 21756 \let\textObullseye\textbullseye
 21757 \let\textctjvar\textctj
 21758 \let\textturnsck\textturnk
 21759 \let\dz\textdzlig
 21760 \let\tesh\textteshlig
 21761 \let\digamma\textdigammagreek
 21762 \let\hardsign\cyrhrdsn
 21763 \let\softsign\cyrsoftsn
 21764 \let\hebsin\hebshin
 21765 \let\textsck\textPUscck
 21766 \let\textscm\textPUscm
 21767 \let\textscp\textPUscp
 21768 \let\textrevscr\textPUrevscr
 21769 \let\textrhooka\textPURhooka
 21770 \let\textrhooke\textPURhooke
 21771 \let\textrhookepsilon\textPURhookepsilon
 21772 \let\textrhookopeno\textPURhookopeno
 21773 \let\textdoublevertline\textbardbl
 21774 \let\dag\textdagger
 21775 \let\ddagger\textdaggerdbl
 21776 \let\ddag\textdaggerdbl
 21777 \let\mathellipsis\textellipsis
 21778 \let\EurDig\texteuro
 21779 \let\EURdig\texteuro
 21780 \let\EurHv\texteuro

21781 \let\EURhv\texteuro
 21782 \let\EurCr\texteuro
 21783 \let\EURcr\texteuro
 21784 \let\EurTm\texteuro
 21785 \let\EURtm\texteuro
 21786 \let\Eur\texteuro
 21787 \let\Denarius\textDeleatur
 21788 \let\agemO\textmho
 21789 \let\EstimatedSign\textestimated
 21790 \let\Ecommerce\textestimated
 21791 \let\bindnasrepma\textinvamp
 21792 \let\parr\textinvamp
 21793 \let\MVRightArrow\textrightarrow
 21794 \let\MVRrightarrow\textrightarrow
 21795 \let\MVArrowDown\textdownarrow
 21796 \let\Force\textdownarrow
 21797 \let\textglobrise\textnearrow
 21798 \let\textglobfall\textsearrow
 21799 \let\Lightning\textlightning
 21800 \let\Conclusion\textRightarrow
 21801 \let\dashedleftarrow\textdashleftarrow
 21802 \let\dashedrightarrow\textdashrightarrow
 21803 \let\varnothing\textemptyset
 21804 \let\owns\textni
 21805 \let\notni\textnotowner
 21806 \let\varprop\textpropto
 21807 \let\varangle\textsphericalangle
 21808 \let\Anglesign\textsphericalangle
 21809 \let\AngleSign\textsphericalangle
 21810 \let\notdivides\textnmid
 21811 \let\varowedge\textowedge
 21812 \let\varovee\textovee
 21813 \let\varint\textint
 21814 \let\varoint\textoint
 21815 \let\downtherefore\textbecause
 21816 \let\textdotdiv\textdotminus
 21817 \let\AC\textsim
 21818 \let\wreath\textwr
 21819 \let\nthickapprox\textnapprox
 21820 \let\VHF\texttriplesim
 21821 \let\notasymp\textnasyp
 21822 \let\Doteq\textdoteqdot
 21823 \let\corresponds\texthateq
 21824 \let\Corresponds\texthateq
 21825 \let\nequal\textneq
 21826 \let\Congruent\textequiv
 21827 \let\NotCongruent\textnequiv
 21828 \let\notequiv\textnequiv
 21829 \let\LessOrEqual\textleq
 21830 \let\LargerOrEqual\textgeq
 21831 \let\apprle\textlesssim
 21832 \let\apprge\textgtrsim
 21833 \let\varoplus\textoplus
 21834 \let\varominus\textominus
 21835 \let\varotimes\textotimes
 21836 \let\varoslash\textoslash
 21837 \let\varodot\textodot

21838 \let\ocirc\textcircledcirc
 21839 \let\varocircle\textcircledcirc
 21840 \let\varoast\textcircledast
 21841 \let\oasterisk\textcircledast
 21842 \let\rightvdash\textvdash
 21843 \let\leftvdash\textdashv
 21844 \let\leftvdash\textndashv
 21845 \let\downvdash\texttop
 21846 \let\upvdash\textbot
 21847 \let\perp\textnupvdash
 21848 \let\models\textvDash
 21849 \let\models\textvDash
 21850 \let\models\textVdash
 21851 \let\models\textVdash
 21852 \let\models\textnvDash
 21853 \let\models\textnvDash
 21854 \let\models\textnvDash
 21855 \let\models\textVdash
 21856 \let\models\textVdash
 21857 \let\lessclosed\textlhd
 21858 \let\gtrclosed\textrhd
 21859 \let\leqclosed\textunlhd
 21860 \let\trianglelefteq\textunlhd
 21861 \let\geqclosed\textunrhd
 21862 \let\trianglerighteq\textunrhd
 21863 \let\Bowtie\textbowtie
 21864 \let\varcurlyvee\textcurlyvee
 21865 \let\varcurlywedge\textcurlywedge
 21866 \let\doublecap\textCap
 21867 \let\doublecup\textCup
 21868 \let\varsubsetneq\textsubsetneq
 21869 \let\varsupsetneq\textsupsetneq
 21870 \let\lessclosed\textntriangleleft
 21871 \let\ngtrclosed\textntriangleright
 21872 \let\Clocklogo\textclock
 21873 \let\ClockLogo\textclock
 21874 \let\baro\textstmaryrdbaro
 21875 \let\varparallel\textbbslash
 21876 \let\CleaningA\textCircledA
 21877 \let\Kutline\textCuttingLine
 21878 \let\CutLine\textCuttingLine
 21879 \let\Cutline\textCuttingLine
 21880 \let\MoveUp\textUParrow
 21881 \let\APLup\textbigtriangleup
 21882 \let\Bleech\textbigtriangleup
 21883 \let\MoveDown\textDOWNarrow
 21884 \let\APLdown\textbigtriangledown
 21885 \let\Diamond\textdiamond
 21886 \let\varbigcirc\textbigcircle
 21887 \let\Telefon\textPhone
 21888 \let\Box\textboxempty
 21889 \let\CheckedBox\textCheckedbox
 21890 \let\XBox\textCrossedbox
 21891 \let\CrossedBox\textCrossedbox
 21892 \let\rightpointleft\textHandLeft
 21893 \let\leftpointright\textHandRight
 21894 \let\PointingHand\textHandRight

21895 \let\Pointinghand\textHandRight
 21896 \let\Radiation\textRadioactivity
 21897 \let\Yinyang\textYinYang
 21898 \let\YingYang\textYinYang
 21899 \let\Yingyang\textYinYang
 21900 \let\Frowny\textfrownie
 21901 \let\Smiley\textsmiley
 21902 \let\Sun\textsun
 21903 \let\Mercury\textmercury
 21904 \let\textfemale\textPUfemale
 21905 \let\female\textPUfemale
 21906 \let\venus\textPUfemale
 21907 \let\Venus\textPUfemale
 21908 \let\Female\textPUfemale
 21909 \let\Earth\textearth
 21910 \let\mars\textmale
 21911 \let\Mars\textmale
 21912 \let\Male\textmale
 21913 \let\Jupiter\textjupiter
 21914 \let\Saturn\textsaturn
 21915 \let\Uranus\texturanus
 21916 \let\Neptune\textneptune
 21917 \let\Pluto\textpluto
 21918 \let\Aries\textaries
 21919 \let\Taurus\texttaurus
 21920 \let\Gemini\textgemini
 21921 \let\Cancer\textcancer
 21922 \let\Leo\textleo
 21923 \let\Virgo\textvirgo
 21924 \let\Libra\textlibra
 21925 \let\Scorpio\textscorpio
 21926 \let\Sagittarius\textsagittarius
 21927 \let\Capricorn\textcapricornus
 21928 \let\Aquarius\textaquarius
 21929 \let\Pisces\textpisces
 21930 \let\spadesuit\textspadesuitblack
 21931 \let\Heart\textheartsuitwhite
 21932 \let\heartsuit\textheartsuitwhite
 21933 \let\diamondsuit\textdiamondsuitwhite
 21934 \let\clubsuit\textclubsuitblack
 21935 \let\ eighthnote\textmusicalnote
 21936 \let\Recycling\textrecycle
 21937 \let\VarFlag\textFlag
 21938 \let\textxswup\textdsimilitary
 21939 \let\textuncrfemale\textPUuncrfemale
 21940 \let\Football\textSoccerBall
 21941 \let\CutLeft\textScissorRightBrokenBottom
 21942 \let\Cutright\textScissorRightBrokenBottom
 21943 \let\RightScissors\textScissorRight
 21944 \let\Leftscissors\textScissorRight
 21945 \let\Letter\textEnvelope
 21946 \let\Writinghand\textWritingHand
 21947 \let\checkmark\textCheckmark
 21948 \let\DavidStar\textDavidStar
 21949 \let\llbracket\textlbrackdbl
 21950 \let\rrbracket\textrrbrackdbl
 21951 \let\RightTorque\textlcurvearrowdown

```

21952 \let\Righttorque\textlcurvearrowdown
21953 \let\LeftTorque\textrcurvearrowdown
21954 \let\Lefttorque\textrcurvearrowdown
21955 \let\textvarobar\textobar
21956 \let\circledbslash\textobslash
21957 \let\obackslash\textobslash
21958 \let\varobslash\textobslash
21959 \let\odplus\textobot
21960 \let\varolessthan\textolessthan
21961 \let\varogreaterthan\textogreaterthan
21962 \let\divdot\textminusdot
21963 \let\doublesqcap\textsquaddoublecap
21964 \let\doublesqcup\textsquaddoublecup
21965 \let\merge\textdoublevee
21966 \let\leftVdash\textdashV
21967 \let\nleftVdash\textndashV
21968 \let\leftmodels\textDashv
21969 \let\nleftmodels\textnDashv
21970 \let\leftModels\textDashV
21971 \let\nleftModels\textnDashV
21972 \let\varparallel\textsslash
21973 \let\textheng\textPUheng
21974 \let\textlhookfour\textPUlhookfour
21975 \let\textscf\textPUscf
21976 \let\textaoilig\textPUailig
21977 \let\Ganz\textfullnote
21978 \let\Halb\texthalfnote
21979 \let\Womanface\textWomanFace
21980 \let\Faxmachine\textFax
21981 \let\CEsign\textCESign
21982 }% \psdaliasnames
21983 </psdextra>

```

52 End of file hyccheck.tex

```

21984 <*check>
21985 \typeout{}
21986 \begin{document}
21987 \end{document}
21988 </check>

```

53 Index

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