

Hypertext marks in \LaTeX

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

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1 Documentation overview for `hyperref`

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

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

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


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

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thmbpdf`” 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       \cname ver@\HyC@package.sty\endcsname
39     }%
```

```

40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

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

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

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

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

Defaults for the switches are now set.

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



```

447 \Hy@bookmarkstrue
448 \Hy@breaklinksfalse
449 \Hy@pdfcenterwindowfalse
450 \Hy@CJKbookmarksfalse
451 \Hy@destlabelfalse
452 \Hy@pdfescapeformfalse
453 \Hy@hyperfiguresfalse
454 \Hy@pdffitwindowfalse
455 \Hy@hyperfootnotesttrue
456 \Hy@hyperindextrue
457 \Hy@hypertextnamestrue
458 \Hy@implittrue
459 \Hy@linktopagefalse
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 <code>ddd</code>
- Strings are stored either in `PDFDocEncoding`, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a 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/ho-tex/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\ssffamily\@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 \let\IfUndefined\language@group\@firstofone
651 \csname HyPsd@babel@language@group\endcsname
652 }%
653 \HyPsd@GreekPatch
654 \HyPsd@SpanishPatch
655 \HyPsd@RussianPatch
656 \HyPsd@BabelPatch
657 \let\@safe@activetrue\relax
658 \let\@safe@activesfalse\relax

  Disable \cyr, used in russianb.ldf.
659 \let\cyr\relax

  Redefine \es@roman, used in spanish.ldf.
660 \let\es@roman\@Roman

```

Package german.

```

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

669 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

670 \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.

```

671 \let\hspace\HyPsd@hspace

```

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

```

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

```


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

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

Miscellaneous commands.

```
681 \let\leavevmode\@empty
682 \let\mbox\@empty
```

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

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

Patch for cjk bookmarks.

```
687 \HyPsd@CJKhook
```

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

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

```
688 \Hy@pdfstringtrue
689 \pdfstringdefPreHook
```

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

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

Package xspace.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
702 \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:

```
703 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
```

```
704 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
```

```
705 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
```

```
706 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
707 \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).

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

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

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

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

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

6.2.3 Postprocessing

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

```
725 \ifx#1\@empty
726 \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.

```

727 \HyPsd@ProtectSpaces#1%
728 \let\HyPsd@String\@empty
729 \expandafter\HyPsd@RemoveBraces\expandafter{#1}%
730 \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.

```

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

```

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

```
744 \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.

```

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

```

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

```

769 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
770 \ltx@ifundefined{@xspace}{%
771 }{%

```

```

772 \let\HyPsd@xspace\relax
773 \expandafter\HyPsd@Subst\expandafter
774   {\HyPsd@XSPACE}\HyPsd@xspace#1%
775 \let\HyPsd@xspace\HyPsd@doxspace
776 }%
777 \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.

```

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

```

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

```

784 \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.

```

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

```

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

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

Try conversion back to PDFDocEncoding.

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

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

```
833 \pdfstringdefPostHook#1%
834 \endgroup
835 }
```

\Hy@pdfstringdef

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

6.3 Encodings

6.3.1 XeTeX

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

```

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

```



```

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

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

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

```

```

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

```

\Hy@RestoreCatcodeSettings

```

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

```

6.3.4 PD1 encoding

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

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

```

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

```

6.3.5 PU encoding

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

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

```

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

```

`\HyPsd@LoadExtra`

```

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

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full 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.

```

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

```

6.4.2 Hooks for `\pdfstringdef`

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

```

\pdfstringdefPostHook
1019 \@ifundefined{pdfstringdefPreHook}{%
1020   \let\pdfstringdefPreHook\@empty
1021 }{}
1022 \@ifundefined{pdfstringdefPostHook}{%
1023   \let\pdfstringdefPostHook\@gobble
1024 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for

problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

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

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

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

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

`\HyPsd@DisableCommands`

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

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

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

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

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

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

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

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression

vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

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

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
  \languageshorthands{system}%
}

```

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

```

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

```

```

1085 \let\Hy@temp\@empty
1086 }{%
1087 \def\HyPsd@BabelPatch{%
1088 \let\HyOrg@languageshorthands\languageshorthands
1089 }%
1090 }%
1091 }{}%
1092 }
1093 \Hy@temp
1094 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1095 \newif\ifHy@next

Nothing to do for english.
1096 \ltx@ifundefined{danish@sh@}{@sel}{}{}%
1097 \def\HyPsd@babel@danish{%
1098 \declare@shorthand{danish}{"}{}{}%
1099 \declare@shorthand{danish}{"}~{}{}%
1100 }%
1101 }
1102 \ltx@ifundefined{dutch@sh@}{@sel}{}{}%
1103 \def\HyPsd@babel@dutch{%
1104 \declare@shorthand{dutch}{"}{}{}%
1105 \declare@shorthand{dutch}{"}~{}{}%
1106 }%
1107 }
1108 \ltx@ifundefined{finnish@sh@}{@sel}{}{}%
1109 \def\HyPsd@babel@finnish{%
1110 \declare@shorthand{finnish}{"}{}{}%
1111 }%
1112 }
1113 \ltx@ifundefined{french@sh@}{@sel}{}{}%
1114 \def\HyPsd@babel@frenchb{%
1115 \def\guill@spacing{ }%
1116 }%
1117 }
1118 \ltx@ifundefined{german@sh@}{@sel}{}{}%
1119 \def\HyPsd@babel@german{%
1120 \declare@shorthand{german}{"}f{}f{}%
1121 \declare@shorthand{german}{"}|{}{}%
1122 \declare@shorthand{german}{"}~{}{}%
1123 }%
1124 }
1125 \ltx@ifundefined{macedonian@sh@}{@sel}{}{}%
1126 \def\HyPsd@babel@macedonian{%
1127 \declare@shorthand{macedonian}{"}|{}{}%
1128 \declare@shorthand{macedonian}{"}~{}{}%
1129 }%
1130 }{}
1131 \ltx@ifundefined{ngerman@sh@}{@sel}{}{}%
1132 \def\HyPsd@babel@ngerman{%
1133 \declare@shorthand{ngerman}{"}|{}{}%
1134 \declare@shorthand{ngerman}{"}~{}{}%
1135 }%
1136 }
1137 \ltx@ifundefined{portuges@sh@}{@sel}{}{}%
1138 \def\HyPsd@babel@portuges{%
1139 \declare@shorthand{portuges}{"}|{}{}%

```

```

1140 }%
1141 }
1142 \ltx@ifundefined{russian@sh@"@sel}{-}{-}%
1143 \def\HyPsd@babel@russian{%
1144   \declare@shorthand{russian}{"}{-}%
1145   \declare@shorthand{russian}{"}{-}%
1146 }%
1147 }
1148 \ltx@ifundefined{slovene@sh@"@sel}{-}{-}%
1149 \def\HyPsd@babel@slovene{%
1150   \declare@shorthand{slovene}{"}{-}%
1151 }%
1152 }

```

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

```

1153 \ltx@ifundefined{spanish@sh@>@sel}{-}{-}%
1154 \def\HyPsd@babel@spanish{%
1155   \declare@shorthand{spanish}{<<}{\guillemotleft}%
1156   \declare@shorthand{spanish}{>>}{\guillemotright}%
1157   \declare@shorthand{spanish}{=}{-}%
1158   \declare@shorthand{spanish}{"}{-}%
1159   \declare@shorthand{spanish}{!}{\textexclamdown}%
1160   \declare@shorthand{spanish}{?}{\textquestiondown}%
1161 }%
1162 }
1163 \ltx@ifundefined{swedish@sh@"@sel}{-}{-}%
1164 \def\HyPsd@babel@swedish{%
1165   \declare@shorthand{swedish}{"}{-}%
1166   \declare@shorthand{swedish}{"}{-}%
1167 }%
1168 }
1169 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{-}%
1170 \def\HyPsd@babel@ukrainian{%
1171   \declare@shorthand{ukrainian}{"}{-}%
1172   \declare@shorthand{ukrainian}{"}{-}%
1173 }%
1174 }
1175 \ltx@ifundefined{usorbian@sh@"@sel}{-}{-}%
1176 \def\HyPsd@babel@usorbian{%
1177   \declare@shorthand{usorbian}{f}{f}%
1178   \declare@shorthand{usorbian}{"}{-}%
1179 }%
1180 }
1181 \ltx@ifundefined{greek@sh@\string~@sel}{-}{-}%
1182 \let\HyPsd@GreekPatch\@empty
1183 }%
1184 \def\HyPsd@GreekPatch{%
1185   \let\greeknumeral\HyPsd@greeknumeral
1186   \let\Greeknnumeral\HyPsd@Greeknnumeral
1187 }%
1188 }
1189 \def\HyPsd@greeknumeral#1{%
1190   \HyPsd@GreekNum\@firstoftwo{#1}%
1191 }
1192 \def\HyPsd@Greeknnumeral#1{%
1193   \HyPsd@GreekNum\@secondoftwo{#1}%
1194 }
1195 \def\HyPsd@GreekNum#1#2{%

```

```

1196 \ifHy@unicode
1197 \ifnum#2<\@ne
1198 \@arabic{#2}%
1199 \else
1200 \ifnum#2<1000000 %
1201 \HyPsd@@GreekNum#1{#2}%
1202 \else
1203 \@arabic{#2}%
1204 \fi
1205 \fi
1206 \else
1207 \@arabic{#2}%
1208 \fi
1209 }
1210 \def\HyPsd@@GreekNum#1#2{%
1211 \ifnum#2<\@m
1212 \ifnum#2<10 %
1213 \expandafter\HyPsd@GreekNumI
1214 \expandafter\@gobble\expandafter#1\number#2%
1215 \else
1216 \ifnum#2<100 %
1217 \expandafter\HyPsd@GreekNumII
1218 \expandafter\@gobble\expandafter#1\number#2%
1219 \else
1220 \expandafter\HyPsd@GreekNumIII
1221 \expandafter\@gobble\expandafter#1\number#2%
1222 \fi
1223 \fi
1224 \ifnum#2>\z@
1225 \textnumeralsigngreek
1226 \fi
1227 \else
1228 \ifnum#2<\@M
1229 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1230 \else
1231 \ifnum#2<100000 %
1232 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1233 \else
1234 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1235 \fi
1236 \fi
1237 \fi
1238 }
1239 \def\HyPsd@GreekNumI#1#2#3{%
1240 #1{%
1241 \ifnum#3>\z@
1242 \textnumeralsignlowergreek
1243 \fi
1244 }%
1245 \expandafter#2%
1246 \ifcase#3 %
1247 {}{}%
1248 \or\textalpha\textAlpha
1249 \or\textbeta\textBeta
1250 \or\textgamma\textGamma
1251 \or\textdelta\textDelta
1252 \or\textepsilon\textEpsilon

```



```

1253 \or\textstigmagreek\textStigmagreek
1254 \or\textzeta\textZeta
1255 \or\texteta\textEta
1256 \or\texttheta\textTheta
1257 \else
1258 {}{}%
1259 \fi
1260 }
1261 \def\HyPsd@GreekNumII#1#2#3#4{%
1262 #1{%
1263 \ifnum#3>\z@
1264 \textnumeralsignlowergreek
1265 \fi
1266 }%
1267 \expandafter#2%
1268 \ifcase#3 %
1269 {}{}%
1270 \or\textiota\textIota
1271 \or\textkappa\textKappa
1272 \or\textlambda\textLambda
1273 \or\textmu\textMu
1274 \or\textnu\textNu
1275 \or\textxi\textXi
1276 \or\textomicron\textOmicron
1277 \or\textpi\textPi
1278 \or\textkoppagreek\textKoppagreek
1279 \else
1280 {}{}%
1281 \fi
1282 \HyPsd@GreekNumI#1#2#4%
1283 }
1284 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1285 #1{%
1286 \ifnum#3>\z@
1287 \textnumeralsignlowergreek
1288 \fi
1289 }%
1290 \expandafter#2%
1291 \ifcase#3 %
1292 {}{}%
1293 \or\extrho\textRho
1294 \or\textsigma\textSigma
1295 \or\texttau\textTau
1296 \or\textupsilon\textUpsilon
1297 \or\textphi\textPhi
1298 \or\textchi\textChi
1299 \or\textpsi\textPsi
1300 \or\textomega\textOmega
1301 \or\textsampigreek\textSampigreek
1302 \else
1303 {}{}%
1304 \fi
1305 \HyPsd@GreekNumII#1#2#4#5%
1306 }
1307 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1308 \HyPsd@GreekNumI\@firstofone#1#2%
1309 \HyPsd@@@GreekNum#1{#3#4#5}%

```

```

1310 }
1311 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1312 \HyPsd@GreekNumII\@firstofone#1#2#3%
1313 \HyPsd@@@GreekNum#1{#4#5#6}%
1314 }
1315 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1316 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1317 \HyPsd@@@GreekNum#1{#5#6#7}%
1318 }

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

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

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

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

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

```

1343 \begingroup
1344 \catcode"7F=\active
1345 \toks@{%

```

```

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

```

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

```

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

```

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

```

1384 \def\HyPsd@DecimalToOctal#1{%
1385   \ifcase #1 %
1386     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1387     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1388     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1389     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1390     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1391     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1392     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1393     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1394     \or @\or A\or B\or C\or D\or E\or F\or G%
1395     \or H\or I\or J\or K\or L\or M\or N\or O%
1396     \or P\or Q\or R\or S\or T\or U\or V\or W%
1397     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%

```

```

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

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

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

```

\HyPsd@CJK@Unicode

```

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

1440 \def\HyPsd@HighA#1!{%
1441 \expandafter\expandafter\expandafter\HyPsd@HighB
1442 \IntCalcDiv#1!64!!%
1443 \expandafter\expandafter\expandafter\HyPsd@HighD
1444 \IntCalcMod#1!64!!%
1445 }
1446 \def\HyPsd@HighB#1!{%
1447 \expandafter\expandafter\expandafter\HyPsd@HighC

```

```

1448 \IntCalcDec#1!!%
1449 }
1450 \def\HyPsd@HighC#1!{%
1451 \IntCalcDiv#1!4!%
1452 \@backslashchar
1453 \IntCalcMod#1!4!%
1454 }
1455 \def\HyPsd@HighD#1!{%
1456 \ifcase\IntCalcDiv#1!8! %
1457 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1458 \fi
1459 \ifcase\IntCalcMod#1!8! %
1460 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1461 \fi
1462 }
1463 \def\HyPsd@DecimalToOctalFirst#1{%
1464 \9%
1465 \ifcase#1 %
1466 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1467 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1468 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1469 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1470 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1471 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1472 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1473 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1474 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1475 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1476 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1477 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1478 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1479 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1480 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1481 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1482 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1483 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1484 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1485 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1486 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1487 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1488 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1489 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1490 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1491 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1492 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1493 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1494 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1495 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1496 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1497 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1498 \fi
1499 }
1500 \def\HyPsd@DecimalToOctalSecond#1{%
1501 \ifcase #1 %
1502 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1503 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1504 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%

```

```

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

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

1544 \def\HyPsd@@CJKnumber#1{%
1545 \ifcase#1 %
1546 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1547 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1548 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1549 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1550 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1551 \CJK@ten\CJK@nine
1552 \else
1553 \ifnum#1<10000 %
1554 \HyPsd@CJKnumberFour#1!\@empty{20}%
1555 \@empty
1556 \else
1557 \ifnum#1<100000000 %
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcDiv#1!10000!%
1560 !{ }{20}%
1561 \CJK@tenthousand

```

```

1562     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1563     \IntCalcMod#1!10000!%
1564     !\CJK@zero{10}%
1565     \@empty
1566   \else
1567     \expandafter\HyPsd@CJKnumberLarge
1568     \number\IntCalcDiv#1!100000000!\expandafter!%
1569     \number\IntCalcMod#1!100000000!!%
1570   \fi
1571 \fi
1572 \fi
1573 }
1574 \def\HyPsd@CJKnumberLarge#1!#2!{%
1575   \HyPsd@CJKnumberFour#1!{ }{20}%
1576   \CJK@hundredmillion
1577   \ifnum#2=\z@
1578   \else
1579     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580     \IntCalcDiv#2!10000!%
1581     !\CJK@zero{10}%
1582     \CJK@tenthousand
1583     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1584     \IntCalcMod#2!10000!%
1585     !\CJK@zero{10}%
1586     \@empty
1587   \fi
1588 }
1589 \def\HyPsd@CJKnumberFour#1!#2#3{%
1590   \ifnum#1=\z@
1591     \expandafter\@gobble
1592   \else
1593     \ifnum#1<1000 %
1594       #2%
1595       \HyPsd@CJKnumberThree#1!{ }{#3}%
1596     \else
1597       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1598       \CJK@thousand
1599       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1600       \IntCalcMod#1!1000!%
1601       !\CJK@zero{10}%
1602     \fi
1603   \fi
1604 }
1605 \def\HyPsd@CJKnumberThree#1!#2#3{%
1606   \ifnum#1=\z@
1607   \else
1608     \ifnum#1<100 %
1609       #2%
1610       \HyPsd@CJKnumberTwo#1!{ }{#3}%
1611     \else
1612       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1613       \CJK@hundred
1614       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1615       \IntCalcMod#1!100!%
1616       !\CJK@zero{10}%
1617     \fi
1618   \fi

```

```

1619 }
1620 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1621   \ifnum#1=\z@
1622   \else
1623     \ifnum#1<#3 %
1624       #2%
1625       \HyPsd@@@CJKnumber{#1}%
1626     \else
1627       \HyPsd@@@CJKnumber{\IntCalcDiv#1!10!}%
1628       \CJK@ten
1629       \ifnum\IntCalcMod#1!10!=\z@
1630       \else
1631         \HyPsd@@@CJKnumber{\IntCalcMod#1!10!}%
1632       \fi
1633     \fi
1634   \fi
1635 }

1636 \def\HyPsd@CJKdigits#1{%
1637   \ifx*#1\relax
1638     \expandafter\HyPsd@@@CJKdigits\expandafter\CJK@zero
1639   \else
1640     \HyPsd@@@CJKdigits\CJK@null{#1}%
1641   \fi
1642 }

1643 \def\HyPsd@@@CJKdigits#1#2{%
1644   \ifx\#2\%
1645   \else
1646     \HyPsd@@@@@CJKdigits#1#2\@nil
1647   \fi
1648 }%

1649 \def\HyPsd@@@@@CJKdigits#1#2#3\@nil{%
1650   \HyPsd@CJKdigit#1{#2}%
1651   \ifx\#3\%
1652     \expandafter\@gobble
1653   \else
1654     \expandafter\@firstofone
1655   \fi
1656   {%
1657     \HyPsd@@@@@CJKdigits#1#3\@nil
1658   }%
1659 }

1660 \def\HyPsd@CJKdigit#1#2{%
1661   \ifcase#2 %
1662     #1\or
1663     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1664     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1665   \fi
1666 }

```

6.5.6 \@inmathwarn-Patch

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

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (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\endcsname\expandafter\endcsname
        \csname?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
    \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1667 \def\HyPsd@inmathwarn#1#2{%
1668   \ifx#2\expandafter
1669     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1670       \HyPsd@GLYPHERR
1671     \expandafter\@gobble\string#1%
1672     >%
1673     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1674   \else
1675     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1676   \fi
1677 \else
1678   \expandafter#2%
1679 \fi
1680 }
1681 \def\HyPsd@GobbleFiFi#1\fi#2\fi{%
1682 \def\HyPsd@EndWithElse#1\else{\else}

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

```

```
1685 #2%
1686 }%
```

6.5.7 Unexpandable spaces

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

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

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

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

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

```
1690 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

`\HyPsd@XSPACE` `\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.

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

6.5.9 `\hspace` fix

`\HyPsd@hspace`

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

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

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

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

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

6.5.10 Fix for AMS classes

```

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

```

6.5.11 Reference commands

`\HyPsd@href`

```

1720 \def\HyPsd@href#1#{\@secondoftwo}

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

1743 \fi
1744 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyPsd@@autorefname`

```

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

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

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

6.5.13 `\ifnextchar`

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

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

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

```

1846 \expandafter\@gobbletwo\@gobble
1847 }

```

6.5.14 \@protected@testopt@ifnextchar

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

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

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

```

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

```

6.6.2 Protecting spaces

```

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

```

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

```

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

```

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

```

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

```

```

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

```

Remove mask.

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

```

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

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

```

6.6.3 Remove grouping braces

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

```

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

```

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

token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

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

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

```

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

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

```

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

6.6.4 Catcode check

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

```

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

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces `#1` should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\@typeset@protect` that is equal to `\relax`).

For the comparison with active characters, `~` cannot be used because it has the meaning of a blank space here. And active characters need to be checked, if they have been defined using `\protected`.

```

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

```

```

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

```

Remove counts, dimens, skips.

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

```

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

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

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

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

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

Catcode warnings.

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

```

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

\HyPsd@RemoveSpaceWarning

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

\HyPsd@ReplaceSpaceWarning

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

6.6.5 Check for wrong glyphs

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

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

```

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

```

Spaces.

`\HyPsd@spaceopti` In the string the spaces are represented by `\HyPsd@spaceopti` tokens. Within an `\edef` it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next `\HyPsd@spaceopti` by an protected space `\040`.

```

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

```

6.6.6 Replacing tokens

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

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

```

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

```

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

```

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

```

`\HyPsd@EscapeTeX`

```

2176 \begingroup

```

```

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

```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

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

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, `\8` is replaced by `\00`, and `\9` is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

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

```

\HyPsd@ConvertToUnicode

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

\HyPsd@DoConvert

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

\HyPsd@DoEscape

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

\HyPsd@GetTwoBytes

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

\HyPsd@GetOneByte

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



```

2269 }%
2270 |endgroup

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

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

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

```

\numexpr 123/4\relax is replaced by
\number\dimexpr.25\dimexpr 123sp\relax\relax

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

```

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

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

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

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

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

$$(5)$$

```

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

```

```

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

```

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

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

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

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

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

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

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

$$(12)$$

```

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

```

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

```

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

```

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

6.6.10 Support for die faces (ifsym et. al.)

\HyPsd@DieFace Die faces are provided by

Package	Macro
ifsym	\Cube
epsdice	\epsdice
hhcount	\fcdice

\Cube and \epsdice restrict the range to the numbers one to six. \fcdice generates for larger numbers several dice faces with the sum matching the number. The implementation for the PDF strings follows \fcdice.

```

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

```

```

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

```

\HyPsd@DieFaceLarge

```

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

```

6.6.11 Support for moon phases of package china2e

```

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

```

6.6.12 Support for package pifont

\HyPsd@ding

```

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

```

```

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

```

\HyPsd@@ding

```

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

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

```

```

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

```

7 Support of other packages

7.1 Class memoir

```

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

```

7.2 Package subfigure

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

```

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

```


7.3 Package xr and xr-hyper

The beta version of xr that supports `\XR@addURL` is called `xr-hyper`. Therefore we test for the macro itself and not for the package name:

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

If reading external aux files check whether they have a non zero fourth field in `\newlabel` and if so, add the URL as the fifth field.

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

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

Providing dummy definitions.

```
2647 \let\literalps@out\@gobble
2648 \newcommand\pdfbookmark[3]{}{}
2649 \def\Acrobatmenu#1#2{\leavevmode#2}
2650 \def\Hy@writebookmark#1#2#3#4#5{%
```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

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

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

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

```

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

```

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

```

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

```

```

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

```

9 Options

```

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

```

9.1 Help macros

`\IfHyperBooleanExists`

```

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

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

```

`\IfHyperBoolean`

```

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

```

`\Hy@boolkey`

```

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

```

```

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

```

\Hy@WarnOptionValue

```

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

```

\Hy@DisableOption

```

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

```

\Hy@WarnOptionDisabled

```

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

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

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

```

```

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

```

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

```

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

```

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

```

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

```

`\Hy@UseNameKey`

```

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

```

9.2 Defining the options

```

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

```

```

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

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

```

```

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

```

If we are going to PDF via HyperTeX `\special` commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing `\special`. If we use this option, the `\special` is raised up by the right amount, to fool the dvi processor.

```

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

```

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

```

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

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

```

```

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

```

```

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

```

Determines whether an automatic anchor is put on each page

```

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

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```



```

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

```

10 Options for different drivers

```

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

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

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

```

```

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

```

```

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

```

```

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

```

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

```

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

```

3286 }

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

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

The automatic footnote linking can be disabled by option hyperfootnotes.

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

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

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

```

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

```

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

```

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

```

Configuration of encap char.

```

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

```

12 Language options

The \autoref feature depends on the language.

```

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

```

```

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

```



```

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

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

3477 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

3478 \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%

```

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

```

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

```

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

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

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

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

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

```
3489 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3490 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autorefname{auto}” etc.

```
3491 \def\itemautorefname{\cyr\cyrp.}%
3492 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

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

```
3493 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3494 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%

```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3495 \def\partautorefname{\cyr\cyrch.}%
3496 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3497 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e, not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autorefname{auto}” etc.

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

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

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

```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

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

```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

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

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

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

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

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

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

```
3511 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

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

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

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

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

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

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

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

```

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

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

```

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

```

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

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

```

```

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

```

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

```

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

```

```

3652 }%
3653 }

```

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

```

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

```

13 Options to change appearance of links

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

```

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

```

14 Bookmarking

```

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

```

```

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

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

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

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

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

```

```

3744 }%
3745 \fi
3746 \endgroup
3747 }

```

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

```

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

```

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

```

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

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

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

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

```



```

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

```

15 PDF-specific options

`\pdfpagetransition` The value of option `pdfpagetransition` is stored in `\pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

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

```

`\pdfpageduration` The value of option `pdfpageduration` is stored in `\pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

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

```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```

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

```

The value of the `bordercolor` options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package `xcolor` provides `\XC@bordercolor` since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package `xcolor` by using `\XC@bordercolor` (since `xcolor` 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

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

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

```

```

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

```

```

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

```

```

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

```

```

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

```

```

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

```

```

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

```



```

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

```

```

4283     }%
4284     \let\@pdfremotestartview\@empty
4285     }%
4286     \ifx\@pdfremotestartview\@empty
4287         \def\@pdfremotestartview{/Fit}%
4288     \else
4289         \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4290     \fi
4291 \fi
4292 }
4293 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4294 \define@key{Hyp}{pdftoolbar}[true]{%
4295     \Hy@boolkey{pdftoolbar}{#1}%
4296 }
4297 \define@key{Hyp}{pdfmenubar}[true]{%
4298     \Hy@boolkey{pdfmenubar}{#1}%
4299 }
4300 \define@key{Hyp}{pdfwindowui}[true]{%
4301     \Hy@boolkey{pdfwindowui}{#1}%
4302 }
4303 \define@key{Hyp}{pdffitwindow}[true]{%
4304     \Hy@boolkey{pdffitwindow}{#1}%
4305 }
4306 \define@key{Hyp}{pdfcenterwindow}[true]{%
4307     \Hy@boolkey{pdfcenterwindow}{#1}%
4308 }
4309 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4310     \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4311 }
4312 \define@key{Hyp}{pdfa}[true]{%
4313     \Hy@boolkey{pdfa}{#1}%
4314 }
4315 \define@key{Hyp}{pdfnewwindow}[true]{%
4316     \def\Hy@temp{#1}%
4317     \ifx\Hy@temp\@empty
4318         \Hy@pdfnewwindowsetfalse
4319     \else
4320         \Hy@pdfnewwindowsettrue
4321         \Hy@boolkey{pdfnewwindow}{#1}%
4322     \fi
4323 }
4324 \def\Hy@SetNewWindow{%
4325     \ifHy@pdfnewwindowset
4326         /NewWindow %
4327     \ifHy@pdfnewwindow true\else false\fi
4328 \fi
4329 }
4330 \Hy@DefNameKey{pdfpagelayout}{%
4331     \do{SinglePage}{}%
4332     \do{OneColumn}{}%
4333     \do{TwoColumnLeft}{}%
4334     \do{TwoColumnRight}{}%
4335     \do{TwoPageLeft}{PDF 1.5}%
4336     \do{TwoPageRight}{PDF 1.5}%
4337 }
4338 \define@key{Hyp}{pdflang}{%
4339     \edef\@pdflang{#1}%

```

```

4340 \def\Hy@temp{\relax}%
4341 \ifx\@pdflang\Hy@temp
4342 \let\@pdflang\relax
4343 \fi
4344 \ifx\@pdflang\relax
4345 \else
4346 \ifx\@pdflang\ltx@empty
4347 \else

```

Test according to ABNF of RFC 3066.

```

4348 \Hy@Match\@pdflang{icase}{%
4349 ~%
4350 [a-z]{1,8}%
4351 (-[a-z0-9]{1,8})*%
4352 $%
4353 }{%

```

Test according to ABNF of RFC 5646.

```

4354 \Hy@Match\@pdflang{icase}{%
4355 ~%
4356 (%
4357 % langtag
4358 (% language
4359 [a-z]{2,3}%
4360 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4361 |[a-z]{4}% reserved for future use
4362 |[a-z]{5,8}% registered language subtag
4363 )%
4364 (-[a-z]{4})?% script
4365 (-([a-z]{2}|[0-9]{3}))?% region
4366 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4367 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4368 (-x(-[a-z0-9]{1,8})+)?% privateuse
4369 % privateuse
4370 |x(-[a-z0-9]{1,8})+%
4371 % grandfathered/irregular
4372 |en-GB-oed%
4373 |i-(ami|bnn|default|enochian|hak|klinton|lux|
4374 mingo|navajo|pwn|tao|tay|tsu)%
4375 |sgn-(BE-FR|BE-NL|CH-DE)%
4376 % grandfathered/regular
4377 |art-lojban%
4378 |cel-gaulish%
4379 |no-(bok|nyn)%
4380 |zh-(guoyu|hakka|min|min-nan|xiang)%
4381 )%
4382 $%
4383 }{%

```

Test for unique extensions.

```

4384 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4385 \Hy@Match\@pdflang{icase}{~x-}{%
4386 % remove privateuse
4387 \edef\Hy@temp{-\@pdflang}%
4388 \Hy@Match\Hy@temp{icase}{%
4389 ~%
4390 (%
4391 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4392 )%

```

```

4393     -x-%
4394   }{%
4395     \edef\Hy@temp{%
4396       \expandafter\strip@prefix\pdfastmatch1%
4397     }%
4398   }{%
4399     \Hy@Match\Hy@temp{icase}{%
4400       (-[a-wyz0-9]-).*\ltx@backslashchar1%
4401     }{%
4402       \Hy@Warning{%
4403         Invalid language identifier `#1'\MessageBreak
4404         for option `pdfang', because it violates\MessageBreak
4405         well-formedness defined in RFC 4646\MessageBreak
4406         by duplicate singleton subtags%
4407       }%
4408       \let\@pdfang\relax
4409     }{%
4410   }%
4411 }{%

```

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

```

4412   \ifx\@pdfang\relax
4413   \else
4414     \Hy@Match\@pdfang{icase}{%
4415       ~%
4416       [a-zA-Z]{2}-%
4417       (%
4418         aa|AA|%
4419         [qQ][m-zA-Z]|%
4420         [xX][a-zA-Z]|%
4421         zz|ZZ%
4422       )%
4423       (-|%)%
4424     }{%
4425       \Hy@Warning{%
4426         Invalid language identifier `#1'\MessageBreak
4427         for option `pdfang' because of invalid country code%
4428       \MessageBreak
4429         in second subtag (RFC 3066)%
4430     }%
4431     \let\@pdfang\relax
4432   }{%
4433   \fi
4434 }{%
4435   \Hy@Warning{%
4436     Invalid language identifier `#1'\MessageBreak
4437     for option `pdfang', because it violates\MessageBreak
4438     well-formedness defined in RFC 5646%
4439   }%
4440   \let\@pdfang\relax
4441 }%
4442 }{%
4443   \Hy@Warning{%
4444     Invalid language identifier `#1'\MessageBreak
4445     for option `pdfang' (RFC 3066)%
4446   }%
4447   \let\@pdfang\relax
4448 }%

```

```

4449 \fi
4450 \fi
4451 }
4452 \define@key{Hyp}{pdfpagelabels}[true]{%
4453 \Hy@boolkey{pdfpagelabels}{#1}%
4454 }
4455 \define@key{Hyp}{pdfescapeform}[true]{%
4456 \Hy@boolkey{pdfescapeform}{#1}%
4457 }

Default values:
4458 \def\@linkbordercolor{1 0 0}
4459 \def\@urlbordercolor{0 1 1}
4460 \def\@menubordercolor{1 0 0}
4461 \def\@filebordercolor{0 .5 .5}
4462 \def\@runbordercolor{0 .7 .7}
4463 \def\@citebordercolor{0 1 0}
4464 \def\@pdfhighlight{/I}
4465 \let\@pdftitle\ltx@empty
4466 \let\@pdfauthor\ltx@empty
4467 \let\@pdfproducer\relax
4468 \def\@pdfcreator{LaTeX with hyperref package}
4469 \let\@pdfcreationdate\ltx@empty
4470 \let\@pdfmoddate\ltx@empty
4471 \let\@pdfsubject\ltx@empty
4472 \let\@pdfkeywords\ltx@empty
4473 \let\@pdftrapped\ltx@empty
4474 \let\@pdfpagescrop\ltx@empty
4475 \def\@pdfstartview{/Fit}
4476 \def\@pdfremotestartview{/Fit}
4477 \def\@pdfstartpage{1}
4478 \let\@pdfprintpagerange\ltx@empty
4479 \let\@pdflang\relax
4480 \let\PDF@SetupDoc\@empty
4481 \let\PDF@FinishDoc\@empty
4482 \let\phantomsection\@empty
4483 \let\special@paper\@empty
4484 \def\HyperDestNameFilter#1{#1}
4485 \Hy@AtBeginDocument{%
4486 \begingroup
4487 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4488 \dimen@=\x\relax
4489 \ifdim\dimen@>\z@
4490 \else
4491 \dimen@=11in\relax
4492 \Hy@WarningNoLine{%
4493 Height of page (\expandafter\string\x) %
4494 is invalid (\the\x),\MessageBreak
4495 using 11in%
4496 }%
4497 \fi
4498 \dimen@=0.99626401\dimen@
4499 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4500 \endgroup
4501 }
4502 \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.

```

4503 \let\hyper@normalise\ExecuteOptions
4504 \let\ExecuteOptions\hypersetup
4505 \Hy@RestoreCatcodes
4506 \InputIfFileExists{hyperref.cfg}{-}{-}
4507 \Hy@SetCatcodes
4508 \let\ExecuteOptions\hyper@normalise
4509 \ifx\Hy@MaybeStopNow\relax
4510 \else
4511   \Hy@stoppedearlytrue
4512   \expandafter\Hy@MaybeStopNow
4513 \fi
4514 \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.

```

4515 \SetupKeyvalOptions{family=Hyp}
4516 \DeclareLocalOptions{%
4517   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4518 }

```

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

```

4519 \@ifpackagewith{hyperref}{tex4ht}{-%
4520 }{%
4521   \@ifpackageloaded{tex4ht}{-%
4522     \PassOptionsToPackage{tex4ht}{hyperref}%
4523   }{%
4524     \ltx@ifundefined{HCode}{-%
4525     }{%
4526       \begingroup
4527       \def\Hy@pkg{tex4ht}%
4528       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4529         \def\Hy@param{#2#3}%
4530         \ifx\Hy@param\ltx@empty
4531           \expandafter\ltx@gobble
4532         \else
4533           \def\Hy@param{#3}%
4534           \ifx\Hy@param\Hy@pkg
4535             \PassOptionsToPackage{#2}{tex4ht}%
4536             \expandafter\expandafter\expandafter\@gobble
4537           \else
4538             \expandafter\expandafter\expandafter\ltx@firstofone
4539           \fi
4540         \fi
4541         {\Hy@temp@A#4\Hy@NIL}%
4542       }%
4543       \expandafter
4544       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4545     \endgroup
4546     \PassOptionsToPackage{tex4ht}{hyperref}%
4547   }%
4548 }%
4549 }

4550 \let\ReadBookmarks\relax
4551 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```
4552 \def\Hy@xspace@end{%
4553 \ltx@ifundefined{xspaceaddexceptions}{%
4554 \Hy@AtBeginDocument{%
4555 \ltx@ifundefined{xspaceaddexceptions}{%
4556 }{%
4557 \def\Hy@xspace@end{%
4558 \ltx@gobble{end for xspace}%
4559 }%
4560 \xspaceaddexceptions{%
4561 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4562 }%
4563 }%
4564 }%
4565 }{%
4566 \def\Hy@xspace@end{%
4567 \ltx@gobble{end for xspace}%
4568 }%
4569 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4570 }
```

15.2 Option draft

```
4571 \Hy@AtBeginDocument{%
4572 \ifHy@draft
4573 \let\hyper@@anchor\@gobble
4574 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4575 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4576 \def\hyper@anchorend{\Hy@xspace@end}%
4577 \let\hyper@linkstart\@gobbletwo
4578 \def\hyper@linkend{\Hy@xspace@end}%
4579 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4580 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4581 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4582 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4583 \let\PDF@SetupDoc\@empty
4584 \let\PDF@FinishDoc\@empty
4585 \let\@fifthoffive\@secondoftwo
4586 \let\@secondoffive\@secondoftwo
4587 \let\ReadBookmarks\relax
4588 \let\WriteBookmarks\relax
4589 \Hy@WarningNoLine{Draft mode on}%
4590 \fi
4591 \Hy@DisableOption{draft}%
4592 \Hy@DisableOption{nolinks}%
4593 \Hy@DisableOption{final}%
4594 }
```

15.3 PDF/A

```
4595 \Hy@DisableOption{pdfa}
4596 \ifHy@pdfa
4597 \ifnum \Hy@pdfversion < 4
4598 \kvsetkeys{Hyp}{pdfversion=1.4}%
4599 \fi
4600 \Hy@DisableOption{pdfversion}%
4601 \def\Hy@Acrobatmenu#1#2{%
4602 \leavevmode
```

```

4603 \begingroup
4604 \edef\x{#1}%
4605 \@onelevel@sanitize\x
4606 \ifx\x\Hy@NextPage
4607   \let\y=Y%
4608 \else
4609   \ifx\x\Hy@PrevPage
4610     \let\y=Y%
4611   \else
4612     \ifx\x\Hy@FirstPage
4613       \let\y=Y%
4614     \else
4615       \ifx\x\Hy@LastPage
4616         \let\y=Y%
4617       \else
4618         \let\y=N%
4619     \fi
4620   \fi
4621 \fi
4622 \fi
4623 \expandafter\endgroup
4624 \ifx\y Y%
4625 \else
4626   \Hy@Error{%
4627     PDF/A: Named action `#1' is not permitted%
4628   }\@ehc
4629   {#2}%
4630   \expandafter\@gobble
4631 \fi
4632 }%
4633 \def\Hy@temp#1{%
4634   \expandafter\def\csname Hy@#1\endcsname{#1}%
4635   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4636 }%
4637 \Hy@temp{NextPage}%
4638 \Hy@temp{PrevPage}%
4639 \Hy@temp{FirstPage}%
4640 \Hy@temp{LastPage}%
4641 \else
4642   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4643 \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.

```

4644 \Hy@nextfalse
4645 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
4646 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
4647 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
4648 \ifHy@next
4649   \let\texttilde\~%
4650 \fi
4651 \def\Hy@wrapper@babel#1#2{%
4652   \begingroup
4653   \Hy@safe@activetrue

```



```

4654 \set@display@protect
4655 \edef\x{#2}%
4656 \@onelevel@sanitize\x
4657 \toks@{#1}%
4658 \edef\x{\endgroup\the\toks@{\x}}%
4659 \x
4660 }
4661 \def\Hy@WrapperDef#1{%
4662 \begingroup
4663 \escapechar=\m@ne
4664 \xdef\Hy@gtemp{%
4665 \expandafter\noexpand\csname HyWrap@string#1\endcsname
4666 }%
4667 \endgroup
4668 \edef#1{%
4669 \noexpand\Hy@wrapper@babel
4670 \expandafter\noexpand\Hy@gtemp
4671 }%
4672 \expandafter\def\Hy@gtemp
4673 }

4674 \ifHy@hyperfigures
4675 \Hy@Info{Hyper figures ON}%
4676 \else
4677 \Hy@Info{Hyper figures OFF}%
4678 \fi
4679 \ifHy@nesting
4680 \Hy@Info{Link nesting ON}%
4681 \else
4682 \Hy@Info{Link nesting OFF}%
4683 \fi
4684 \ifHy@hyperindex
4685 \Hy@Info{Hyper index ON}%
4686 \else
4687 \Hy@Info{Hyper index OFF}%
4688 \fi
4689 \ifHy@plainpages
4690 \Hy@Info{Plain pages ON}%
4691 \else
4692 \Hy@Info{Plain pages OFF}%
4693 \fi
4694 \ifHy@backref
4695 \Hy@Info{Backreferencing ON}%
4696 \else
4697 \Hy@Info{Backreferencing OFF}%
4698 \fi
4699 \ifHy@typexml
4700 \Hy@AtEndOfPackage{%
4701 \RequirePackage{color}%
4702 \RequirePackage{nameref}[2012/07/28]%
4703 }%
4704 \fi
4705 \Hy@DisableOption{typexml}
4706 \ifHy@implicit
4707 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4708 \else
4709 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4710 \def\MaybeStopEarly{%

```

```

4711 \Hy@Message{Stopped early}%
4712 \Hy@AtBeginDocument{%
4713   \PDF@FinishDoc
4714   \gdef\PDF@FinishDoc{}%
4715 }%
4716 \endinput
4717 }%
4718 \Hy@AtBeginDocument{%
4719   \let\autoref\ref
4720   \let\autopageref\pageref
4721   \ifx\@pdfpagemode\@empty
4722     \gdef\@pdfpagemode{UseNone}%
4723   \fi
4724   \global\Hy@backreffalse
4725 }%
4726 \Hy@AtEndOfPackage{%
4727   \global\let\ReadBookmarks\relax
4728   \global\let\WriteBookmarks\relax
4729 }%
4730 \fi
4731 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4732 \Hy@AtEndOfPackage{%
4733   \@ifpackageloaded{tex4ht}{%
4734     \def\Hy@driver{htex4ht}%
4735     \Hy@texhttrue
4736   }{}%

```

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.

```

4737 \ifx\Hy@driver\@empty
4738 \else
4739   \ifx\pdfextension\@undefined
4740     \def\Hy@temp{hpdfTeX}%
4741   \else
4742     \def\Hy@temp{hluatex}%
4743   \fi
4744 \ifpdf
4745   \ifx\Hy@driver\Hy@temp
4746   \else
4747     \Hy@WarningNoLine{%
4748       Wrong driver ``\Hy@driver.def';\MessageBreak
4749       pdfTeX is running in PDF mode.\MessageBreak
4750       Forcing driver ``\Hy@temp.def'%
4751     }%
4752     \let\Hy@driver\Hy@temp
4753   \fi
4754 \else
4755   \ifx\Hy@driver\Hy@temp
4756   \Hy@WarningNoLine{%
4757     Wrong driver ``\Hy@driver.def';\MessageBreak
4758     pdfTeX is not running in PDF mode.\MessageBreak
4759     Using default driver%
4760   }%
4761   \let\Hy@driver\@empty
4762 \fi

```

```

4763 \fi
4764 \fi
4765 \ifHy@texht
4766 \else
4767 \ifx\Hy@driver\@empty
4768 \else
4769 \def\Hy@temp{hxtex}%
4770 \ifxetex
4771 \ifx\Hy@driver\Hy@temp
4772 \else
4773 \Hy@WarningNoLine{%
4774   Wrong driver ``\Hy@driver.def';\MessageBreak
4775   XeTeX is running.\MessageBreak
4776   Forcing driver ``\Hy@temp.def' for XeTeX%
4777 }%
4778 \let\Hy@driver\Hy@temp
4779 \fi
4780 \fi
4781 \fi
4782 \fi
4783 \ifx\Hy@driver\@empty
4784 \else
4785 \def\Hy@temp{hvtexhtm}%
4786 \ifvtexhtml
4787 \ifx\Hy@driver\Hy@temp
4788 \else
4789 \Hy@WarningNoLine{%
4790   Wrong driver ``\Hy@driver.def';\MessageBreak
4791   VTeX is running in HTML mode.\MessageBreak
4792   Forcing driver ``\Hy@temp.def'%
4793 }%
4794 \let\Hy@driver\Hy@temp
4795 \fi
4796 \else
4797 \ifx\Hy@driver\Hy@temp
4798 \Hy@WarningNoLine{%
4799   Wrong driver ``\Hy@driver.def';\MessageBreak
4800   VTeX is not running in HTML mode.\MessageBreak
4801   Using default driver%
4802 }%
4803 \let\Hy@driver\@empty
4804 \fi
4805 \fi
4806 \fi

```

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

```

4807 \let\HyOpt@DriverType\ltx@empty
4808 \ifx\HyOpt@CustomDriver\ltx@empty
4809 \ifx\Hy@driver\@empty
4810 \def\HyOpt@DriverType{ (autodetected)}%
4811 \providecommand*{\Hy@defaultdriver}{hypertex}%
4812 \ifpdf
4813 \ifx\pdfextension\@undefined
4814 \def\Hy@driver{hpdftex}%
4815 \else
4816 \def\Hy@driver{hluatex}%
4817 \fi
4818 \else

```

```

4819 \ifxetex
4820 \def\Hy@driver{hxdetex}%
4821 \else
4822 \ifvtexhtml
4823 \def\Hy@driver{hvtexhtm}%
4824 \def\MaybeStopEarly{%
4825 \Hy@Message{Stopped early}}%
4826 \Hy@AtBeginDocument{%
4827 \PDF@FinishDoc
4828 \gdef\PDF@FinishDoc{}}%
4829 }%
4830 \endinput
4831 }%
4832 \else
4833 \ifvtexpdf
4834 \def\Hy@driver{hvtex}%
4835 \else
4836 \ifvtexps
4837 \def\Hy@driver{hvtex}%
4838 \else
4839 \ifx\HyOpt@DriverFallback\ltx@empty
4840 \let\Hy@driver\Hy@defaultdriver
4841 \def\HyOpt@DriverType{ (default)}%
4842 \else
4843 \begingroup
4844 \toks@{\expandafter{\HyOpt@DriverFallback}}%
4845 \edef\x{\endgroup
4846 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4847 }%
4848 \x
4849 \ifx\Hy@driver\ltx@empty
4850 \let\Hy@driver\Hy@defaultdriver
4851 \def\HyOpt@DriverType{ (default)}%
4852 \else
4853 \def\HyOpt@DriverType{ (fallback)}%
4854 \fi
4855 \fi
4856 \fi
4857 \fi
4858 \fi
4859 \fi
4860 \fi
4861 \ifx\Hy@driver\Hy@defaultdriver
4862 \def\Hy@temp{hdvwind}%
4863 \ifx\Hy@temp\Hy@driver
4864 \kvsetkeys{Hyp}{colorlinks}%
4865 \PassOptionsToPackage{dviwindo}{color}%
4866 \fi
4867 \fi
4868 \fi
4869 \else
4870 \def\HyOpt@DriverType{ (custom)}%
4871 \let\Hy@driver\HyOpt@CustomDriver
4872 \fi
4873 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4874 \chardef\Hy@VersionChecked=0 %
4875 \input{\Hy@driver.def}%

```

```

4876 \ifcase\Hy@VersionChecked
4877   \Hy@VersionCheck{\Hy@driver.def}%
4878 \fi
4879 \let\@unprocessedoptions\relax
4880 \Hy@RestoreCatcodes
4881 \Hy@DisableOption{tex4ht}%
4882 \Hy@DisableOption{pdftex}%
4883 \Hy@DisableOption{nativepdf}%
4884 \Hy@DisableOption{dvipdfm}%
4885 \Hy@DisableOption{dvipdfmx}%
4886 \Hy@DisableOption{dvipdfmx-outline-open}%
4887 \Hy@DisableOption{pdfmark}%
4888 \Hy@DisableOption{dvips}%
4889 \Hy@DisableOption{hypertex}%
4890 \Hy@DisableOption{vtex}%
4891 \Hy@DisableOption{vtexpdfmark}%
4892 \Hy@DisableOption{dviwindo}%
4893 \Hy@DisableOption{dvipsone}%
4894 \Hy@DisableOption{textures}%
4895 \Hy@DisableOption{latex2html}%
4896 \Hy@DisableOption{ps2pdf}%
4897 \Hy@DisableOption{xetex}%
4898 \Hy@DisableOption{driverfallback}%
4899 \Hy@DisableOption{customdriver}%
4900 \Hy@DisableOption{pdfversion}%
4901 }

```

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.

```

4902 \newif\ifHy@DvipdfmxOutlineOpen
4903 \ifxetex
4904   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4905   \else
4906     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4907     \Hy@DvipdfmxOutlineOpenttrue
4908   \fi
4909 \fi
4910 \begingroup\expandafter\expandafter\expandafter\endgroup
4911 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4912 \else
4913   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4914     \Hy@DvipdfmxOutlineOpenttrue
4915   \fi
4916 \fi

```

15.4.2 Bookmarks

```

4917 \def\WriteBookmarks{0}
4918 \def\@bookmarkopenstatus#1{%
4919   \ifHy@bookmarksopen

```

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

```

4920   \ifnum#1<\expandafter\@firstofone\expandafter
4921     {\number\@bookmarkopenlevel} % explicit space
4922   \else
4923     -%
4924   \fi

```

```

4925 \else
4926 -%
4927 \fi
4928 }
4929 \ifHy@bookmarks
4930 \Hy@Info{Bookmarks ON}%
4931 \ifx\@pdfpagemode\@empty
4932 \def\@pdfpagemode{UseOutlines}%
4933 \fi
4934 \else
4935 \let\@bookmarkopenstatus\ltx@gobble
4936 \Hy@Info{Bookmarks OFF}%
4937 \Hy@AtEndOfPackage{%
4938 \global\let\ReadBookmarks\relax
4939 \global\let\WriteBookmarks\relax
4940 }%
4941 \ifx\@pdfpagemode\@empty
4942 \def\@pdfpagemode{UseNone}%
4943 \fi
4944 \fi
4945 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4946 \def\Hy@CatcodeWrapper#1{%
4947 \let\Hy@endWrap\ltx@empty
4948 \def\TMP@EnsureCode##1##2{%
4949 \edef\Hy@endWrap{%
4950 \Hy@endWrap
4951 \catcode##1 \the\catcode##1\relax
4952 }%
4953 \catcode##1 ##2\relax
4954 }%
4955 \TMP@EnsureCode{10}{12}% ^^J
4956 \TMP@EnsureCode{33}{12}% !
4957 \TMP@EnsureCode{34}{12}% "
4958 \TMP@EnsureCode{36}{3}% $ (math)
4959 \TMP@EnsureCode{38}{4}% & (alignment)
4960 \TMP@EnsureCode{39}{12}% '
4961 \TMP@EnsureCode{40}{12}% (
4962 \TMP@EnsureCode{41}{12}% )
4963 \TMP@EnsureCode{42}{12}% *
4964 \TMP@EnsureCode{43}{12}% +
4965 \TMP@EnsureCode{44}{12}% ,
4966 \TMP@EnsureCode{45}{12}% -
4967 \TMP@EnsureCode{46}{12}% .
4968 \TMP@EnsureCode{47}{12}% /
4969 \TMP@EnsureCode{58}{12}% :
4970 \TMP@EnsureCode{59}{12}% ;
4971 \TMP@EnsureCode{60}{12}% <
4972 \TMP@EnsureCode{61}{12}% =
4973 \TMP@EnsureCode{62}{12}% >
4974 \TMP@EnsureCode{63}{12}% ?
4975 \TMP@EnsureCode{91}{12}% [
4976 \TMP@EnsureCode{93}{12}% ]
4977 \TMP@EnsureCode{94}{7}% ^ (superscript)
4978 \TMP@EnsureCode{95}{8}% _ (subscript)
4979 \TMP@EnsureCode{96}{12}% `
4980 \TMP@EnsureCode{124}{12}% |

```

```

4981 \TMP@EnsureCode{126}{13}% ~ (active)
4982 #1\relax
4983 \Hy@EndWrap
4984 }

```

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

```

4985 \Hy@AtBeginDocument{%
4986 \ifHy@ocgcolorlinks
4987 \kvsetkeys{Hyp}{colorlinks}%
4988 \ifHy@pdfa
4989 \Hy@Warning{%
4990 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4991 using `colorlinks' instead of `ocgcolorlinks'%
4992 }%
4993 \Hy@ocgcolorlinksfalse
4994 \fi
4995 \fi
4996 \ifHy@ocgcolorlinks
4997 \else
4998 \Hy@DisableOption{ocgcolorlinks}%
4999 \fi
5000 \ifHy@colorlinks
5001 \def\@pdfborder{0 0 0}%
5002 \let\@pdfborderstyle\@empty
5003 \ifHy@typexml
5004 \else
5005 \Hy@CatcodeWrapper{%
5006 \RequirePackage{color}%
5007 }%
5008 \fi
5009 \def\Hy@colorlink#1{%
5010 \begingroup
5011 \HyColor@UseColor#1%
5012 }%
5013 \def\Hy@endcolorlink{\endgroup}%
5014 \Hy@Info{Link coloring ON}%
5015 \else
5016 \ifHy@frenchlinks
5017 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
5018 \def\Hy@endcolorlink{\endgroup}%
5019 \Hy@Info{French linking ON}%
5020 \else

```

for grouping consistency:

```

5021 \def\Hy@colorlink#1{\begingroup}%
5022 \def\Hy@endcolorlink{\endgroup}%
5023 \Hy@Info{Link coloring OFF}%
5024 \fi
5025 \fi
5026 \Hy@DisableOption{colorlinks}%
5027 \Hy@DisableOption{frenchlinks}%
5028 \ifHy@texht
5029 \long\def\@firstoffive#1#2#3#4#5{#1}%
5030 \long\def\@secondoffive#1#2#3#4#5{#2}%
5031 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5032 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5033 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5034 \providecommand*\@safe@activetrue{}%

```

```

5035 \providecommand*\@safe@activesfalse{%
5036 \def\T@ref#1{%
5037 \Hy@safe@activestru
5038 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5039 \Hy@safe@activesfalse
5040 }%
5041 \def\T@pageref#1{%
5042 \Hy@safe@activestru
5043 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5044 \Hy@safe@activesfalse
5045 }%
5046 \else
5047 \ifHy@typexml
5048 \else
5049 \Hy@CatcodeWrapper{%
5050 \RequirePackage{nameref}[2012/07/28]%
5051 }%
5052 \fi
5053 \fi
5054 \DeclareRobustCommand\ref{%
5055 \@ifstar\@refstar\T@ref
5056 }%
5057 \DeclareRobustCommand\pageref{%
5058 \@ifstar\@pagerefstar\T@pageref
5059 }%
5060 % \@ifclassloaded{memoir}{%
5061 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5062 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5063 % }%
5064 % }\ltx@secondoftwo
5065 % {%
5066 % \DeclareRobustCommand*\@nameref{%
5067 % \@ifstar\@mem@titlerefno link\@mem@titleref
5068 % }%
5069 % }{%
5070 \DeclareRobustCommand*\@nameref{%
5071 \@ifstar\@namerefstar\T@nameref
5072 }%
5073 % }%
5074 }
5075 \Hy@AtBeginDocument{%
5076 \ifHy@texht
5077 \else
5078 \Hy@CatcodeWrapper\ReadBookmarks
5079 \fi
5080 }
5081 \ifHy@backref
5082 \RequirePackage{backref}%
5083 \else
5084 \let\Hy@backout\@gobble
5085 \fi
5086 \Hy@DisableOption{backref}
5087 \Hy@DisableOption{pagebackref}
5088 \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.

```

5089 \begingroup
5090 \endlinechar=-1 %
5091 \catcode\^^A=14 %
5092 \catcode\^^M\active
5093 \catcode\%\active
5094 \catcode\#\active
5095 \catcode\_ \active
5096 \catcode\$ \active
5097 \catcode\& \active
5098 \gdef\hyper@normalise{^^A
5099 \begingroup
5100 \catcode\^^M\active
5101 \def^^M{ }^^A
5102 \catcode\%\active
5103 \let%\@percentchar
5104 \let\_ \@percentchar
5105 \catcode\#\active
5106 \def#{\hyper@hash}^^A
5107 \def#{\hyper@hash}^^A
5108 \@makeother\&^^A
5109 \edef&{\string&}^^A
5110 \edef&{\string&}^^A
5111 \edef\textunderscore{\string_}^^A
5112 \let\_ \textunderscore
5113 \catcode\_ \active
5114 \let\_ \textunderscore
5115 \let~\hyper@tilde
5116 \let~\hyper@tilde
5117 \let\textasciitilde\hyper@tilde
5118 \let\\ \@backslashchar
5119 \edef$\string$}^^A
5120 \Hy@safe@activetrue
5121 \hyper@n@rmalise
5122 }^^A
5123 \catcode\#=6 ^^A
5124 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5125 \gdef\hyper@n@rmalise#1#2{^^A
5126 \def\Hy@tempa{#2}^^A
5127 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5128 \ltx@ReturnAfterElseFi{^^A
5129 \hyper@@normalise{#1}^^A
5130 }^^A
5131 \else
5132 \ltx@ReturnAfterFi{^^A
5133 \hyper@@normalise{#1}{#2}^^A
5134 }^^A
5135 \fi
5136 }^^A

```

```

5137 \gdef\hyper@@normalise#1#2{^^A
5138 \edef\Hy@tempa{^^A
5139 \endgroup
5140 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
5141 }^^A
5142 \Hy@tempa
5143 }^^A
5144 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
5145 #1^^A
5146 \ifx\limits#2\limits
5147 \else
5148 \ltx@ReturnAfterFi{^^A
5149 \Hy@RemovePercentCr #2\@nil
5150 }^^A
5151 \fi
5152 }^^A
5153 \endgroup
5154 \providecommand*\hyper@chars{%
5155 \let\#\hyper@hash
5156 \let\%\@percentchar
5157 \Hy@safe@activestrue
5158 }

5159 \def\hyperlink#1#2{%
5160 \hyper@@link{}{#1}{#2}%
5161 }

5162 \def\Hy@VerboseLinkStart#1#2{%
5163 \ifHy@verbose
5164 \begingroup
5165 \Hy@safe@activestrue
5166 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5167 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5168 \xdef\Hy@VerboseGlobalTemp{%
5169 \Hy@VerboseGlobalTemp, %
5170 line \the\inputlineno
5171 }%
5172 \endgroup
5173 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5174 \@onelevel@sanitize\Hy@VerboseLinkInfo
5175 \fi
5176 }

5177 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5178 \def\Hy@VerboseLinkStop{%
5179 \ifHy@verbose
5180 \begingroup
5181 \edef\x{\endgroup
5182 \write\m@ne{%
5183 Package `hyperref' Info: %
5184 End of reference \Hy@VerboseLinkInfo.%
5185 }%
5186 }%
5187 \x
5188 \fi
5189 }

5190 \def\Hy@VerboseAnchor#1{%
5191 \ifHy@verbose
5192 \begingroup

```

```

5193 \Hy@safe@activetrue
5194 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}{%
5195 \endgroup
5196 \fi
5197 }

5198 \def\Hy@AllowHyphens{%
5199 \relax
5200 \ifhmode
5201 \penalty\@M
5202 \hskip\z@skip
5203 \fi
5204 }

5205 \DeclareRobustCommand*{\href}[1][]{%
5206 \begingroup
5207 \setkeys{href}{#1}%
5208 \@ifnextchar\bgrouphref{\hyper@normalise\href@}%
5209 }
5210 \def\Hy@href#-{%
5211 \hyper@normalise\href@
5212 }
5213 \begingroup
5214 \catcode`\$=6 %
5215 \catcode`\#=12 %
5216 \gdef\href@\$1{\expandafter\href@split$1##\}%
5217 \gdef\href@split$1##$2##$3\\$4{%
5218 \hyper@@link{$1}{$2}{$3}{$4}%
5219 \endgroup
5220 }%
5221 \endgroup

```

Option ‘page’.

```

5222 \define@key{href}{page}{%
5223 \def\Hy@href@page{#1}%
5224 }
5225 \let\Hy@href@page\@empty
5226 \newcount\c@Hy@tempcnt
5227 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5228 \def\Hy@MakeRemoteAction{%
5229 \ifx\Hy@href@page\@empty
5230 \def\Hy@href@page{0}%
5231 \else
5232 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5233 \ifnum\c@Hy@tempcnt<\@ne
5234 \Hy@Warning{%
5235 Invalid page number (\theHy@tempcnt)\MessageBreak
5236 for remote PDF file.\MessageBreak
5237 Using page 1%
5238 }%
5239 \def\Hy@href@page{0}%
5240 \else
5241 \global\advance\c@Hy@tempcnt\m@ne
5242 \edef\Hy@href@page{\theHy@tempcnt}%
5243 \fi
5244 \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.

```

5245 \ifx\Hy@href@nextactionraw\@empty
5246 \else
5247 \Hy@pdfnewwindowsettrue
5248 \Hy@pdfnewwindowtrue
5249 \fi
5250 }

```

Option ‘pdfremotestartview’.

```

5251 \define@key{href}{pdfremotestartview}{%
5252 \setkeys{Hyp}{pdfremotestartview={#1}}}%
5253 }

```

Option ‘pdfnewwindow’.

```

5254 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5255 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5256 \newif\ifHy@href@ismap
5257 \define@key{href}{ismap}[true]{%
5258 \ltx@ifundefined{Hy@href@ismap#1}{%
5259 \Hy@Error{%
5260 Invalid value (#1) for key `ismap'.\MessageBreak
5261 Permitted values are `true' or `false'.\MessageBreak
5262 Ignoring `ismap'%
5263 }%\ehc
5264 }{%
5265 \csname Hy@href@ismap#1\endcsname
5266 }%
5267 }

```

Option ‘nextactionraw’.

```

5268 \let\Hy@href@nextactionraw\@empty
5269 \define@key{href}{nextactionraw}{%
5270 \edef\Hy@href@nextactionraw{#1}%
5271 \ifx\Hy@href@nextactionraw\@empty
5272 \else
5273 \Hy@Match\Hy@href@nextactionraw{}{%
5274 ~(\HyPat@ObjRef/|<<.*[/S[/|. +>>|)%
5275 \[( ?\HyPat@ObjRef/|<<.*[/S[/|. +>>)+ ?])$%
5276 }{}{%
5277 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5278 \Hy@href@nextactionraw\MessageBreak
5279 The action is discarded%
5280 }%
5281 }%
5282 \ifx\Hy@href@nextactionraw\@empty
5283 \else
5284 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5285 \fi
5286 \fi
5287 }
5288 \def\HyPat@ObjRef/{.+}

```

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

```

5289 \RequirePackage{url}
5290 \let\HyOrg@url\url
5291 \def\Hurl{\begingroup \Url}
5292 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5293 \def\nolinkurl@#1{\Hurl{#1}}

```

```

5294 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5295 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5296 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5297 \providecommand\hyper@image[2]{#2}

5298 \def\hypertarget#1#2{%
5299   \ifHy@nesting
5300     \hyper@@anchor{#1}{#2}%
5301   \else
5302     \hyper@@anchor{#1}{\relax}#2%
5303   \fi
5304 }

```

`\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.

```

5305 \DeclareRobustCommand*{\hyperref}{%
5306   \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5307 }
5308 \def\Hy@babelnormalise#1[#2]{%
5309   \begingroup
5310     \Hy@safe@activestruer
5311     \edef\Hy@tempa{%
5312       \endgroup
5313       \noexpand#1[#2]}%
5314   }%
5315   \Hy@tempa
5316 }
5317 \def\@hyperref{\hyper@normalise\@hyperref}
5318 \def\@hyperref#1#2#3{%
5319   \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
5320   \expandafter\tryhyper@link\ref@one\{#1}%
5321 }
5322 \def\tryhyper@link#1\{#2{%
5323   \hyper@@link{#2}{#1}%
5324 }

5325 \def\hyperdef{\ifnextchar{\label@hyperdef}\@hyperdef}
5326 \def\@hyperdef#1#2#3{%, category, name, text
5327   \ifx\\#1\\%
5328     \def\Hy@AnchorName{#2}%
5329   \else
5330     \def\Hy@AnchorName{#1.#2}%
5331   \fi
5332   \ifHy@nesting
5333     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5334   \else
5335     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5336   \fi
5337 }

```

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

```

5338 \def\label@hyperref[#1]{%

```

```

5339 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5340 }%
5341 \def\label@@hyperref#1#2#3{%
5342   \ifx#1\relax
5343     \protect\G@refundefinedtrue
5344     \@latex@warning{%
5345       Hyper reference `#2' on page \thepage \space undefined%
5346     }%
5347     \begingroup
5348       #3%
5349     \endgroup
5350   \else
5351     \hyper@@link{\expandafter\@fifthoffive#1}%
5352     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5353   \fi
5354 }
5355 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5356                               % anchor text
5357   \@bsphack
5358   \ifx\\#2\\%
5359     \def\Hy@AnchorName{#3}%
5360   \else
5361     \def\Hy@AnchorName{#2.#3}%
5362   \fi
5363   \if@filesw
5364     \protected@write\@auxout{}{%
5365       \string\newlabel{#1}{#2}{#3}{\Hy@AnchorName}{#4}%
5366     }%
5367   \fi
5368   \@esphack
5369   \ifHy@nesting
5370     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5371   \else
5372     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5373   \fi
5374 }

```

16.1 Link box support for XeTeX

```

5375 \newdimen\XeTeXLinkMargin
5376 \setlength{\XeTeXLinkMargin}{2pt}
5377 \ifxetex
5378   \font\XeTeXLink@font=pzdr at 1sp\relax
5379   \newcommand*\XeTeXLink@space{%
5380     \begingroup
5381       \XeTeXLink@font
5382       \@xxxii
5383     \endgroup
5384   }%
5385   \newcommand{\XeTeXLinkBox}[1]{%
5386     \begingroup
5387       \leavevmode
5388       \sbox\z@{#1}%
5389       \begingroup
5390         \dimen@=\dp\z@
5391         \advance\dimen@\XeTeXLinkMargin
5392         \setbox\tw@=\llap{%

```

```

5393      \hb@xt@\XeTeXLinkMargin{%
5394      \lower\dimen@\hbox{\XeTeXLink@space}%
5395      \hss
5396      }%
5397  }%
5398  \dp\tw@=\dp\z@
5399  \ht\tw@=\ht\z@
5400  \copy\tw@
5401  \endgroup
5402  \copy\z@
5403  \dimen@=\ht\z@
5404  \advance\dimen@\XeTeXLinkMargin
5405  \setbox\tw@=\rlap{%
5406  \hb@xt@\XeTeXLinkMargin{%
5407  \hss
5408  \raise\dimen@\hbox{\XeTeXLink@space}%
5409  }%
5410  }%
5411  \dp\tw@=\dp\z@
5412  \ht\tw@=\ht\z@
5413  \copy\tw@
5414  \endgroup
5415  }%
5416  \else
5417  \newcommand*\XeTeXLinkBox}[1]{%
5418  \begingroup
5419  \leavevmode
5420  \sbox\z@{#1}%
5421  \copy\z@
5422  \endgroup
5423  }%
5424  \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, it's an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

5425 \def\hyper@@link{\let\Hy@reserved@a\relax
5426 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
5427 }
5428 % #1: type
5429 % #2: URL
5430 % #3: destination name
5431 % #4: text
5432 \def\hyper@link@[#1]#2#3#4{%
5433 \ltx@ifempty{#4}{% link text
5434 \Hy@Warning{Suppressing empty link}%
5435 }{%
5436 \begingroup
5437 \protected@edef\Hy@tempa{#2}%
5438 \edef\Hy@tempb{#3}%
5439 \ifx\Hy@tempa\ltx@empty
5440 \Hy@tempb\ltx@empty
5441 \Hy@Warning{Suppressing link with empty target}%
5442 \toks@{%

```

```

5443         \endgroup
5444         \ltx@secondoftwo
5445     }%
5446     \else
5447         \toks@{%
5448             \endgroup
5449             \hyper@link{#1}%
5450         }%
5451     \fi
5452     \else
5453         \toks@{%
5454             \endgroup
5455             \expandafter\hyper@readexternallink#2\{#1}%
5456         }%
5457     \fi
5458     \Hy@safe@activesfalse
5459     \toks@\expandafter{%
5460         \the\expandafter\toks@
5461         \expandafter{\Hy@tempb}{#4}%
5462     }%
5463     \the\toks@
5464 }%
5465 }

```

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.

```

5466 \def\hyper@readexternallink#1\{#2#3#4{%
5467     \begingroup
5468     \let\\\relax
5469     \expandafter\endgroup
5470     \expandafter\@hyper@\@readexternallink#1\{#2}{#3}{#4}%
5471 }
5472 \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.

```

5473     \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5474 }

```

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

```

5475 \def\@pdftempwordfile{file}%
5476 \def\@pdftempwordrun{run}%
5477 \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**:

```

5478 \ifx\#6\%
5479 \@hyper@linkfile file:#7\{\#3}\{\#2}\{\#7}%
5480 \else
5481 \ifx\#4\%
5482 \@hyper@linkfile file:#7\{\#3}\{\#2}\{\#7}%
5483 \else

```

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

```

5484 \def\@pdftempa{\#4}%
5485 \ifx\@pdftempa\@pdftempwordfile
5486 \@hyper@linkfile#7\{\#3}\{\#2}\{\#7}%
5487 \else

```

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

```

5488 \ifx\@pdftempa\@pdftempwordrun
5489 \ifHy@pdfa
5490 \Hy@Error{%
5491 PDF/A: Launch action is prohibited%
5492 }\@ehc
5493 \begingroup
5494 \leavevmode
5495 #2%
5496 \endgroup
5497 \else
5498 \@hyper@launch#7\{\#3}\{\#2}%
5499 \fi
5500 \else

```

otherwise its a URL

```

5501 \hyper@linkurl{\#3}\{\#7\ifx\#2\else\hyper@hash#2\fi}%
5502 \fi
5503 \fi
5504 \fi
5505 \fi
5506 }

```

By default, turn run: into file:

```

5507 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5508 \hyper@linkurl{\#2}%
5509 \Hy@linkfileprefix
5510 #1%
5511 \ifx\#3\%
5512 \else
5513 \hyper@hash
5514 #3%
5515 \fi
5516 }%
5517 }

```

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

```

5518 \def\@hyper@linkfile file:#1\#2#3#4{%
5519 %file url,link string, name, original uri
5520 \filename@parse{\#1}%
5521 \ifx\filename@ext\relax

```

```

5522 \edef\filename@ext{\XR@ext}%
5523 \fi
5524 \def\use@file{\filename@area\filename@base.\filename@ext}%
5525 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5526 \hyper@linkfile{#2}{\use@file}{#3}%
5527 }{%
5528 \ifx\@baseurl\@empty
5529 \hyper@linkurl{#2}{%
5530 #4\ifx\\#3\\else\hyper@hash#3\fi
5531 }%
5532 \else
5533 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5534 \fi
5535 }%
5536 }

5537 \def\Hy@ifStringEndsWith#1#2{%
5538 \begingroup
5539 \edef\x{#1}%
5540 \@onelevel@sanitize\x
5541 \edef\x{.\x}%
5542 \edef\y{#2}%
5543 \@onelevel@sanitize\y
5544 \edef\y{.\y}%
5545 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5546 \endgroup
5547 \ifx\relax##2\relax
5548 \expandafter\ltx@secondoftwo
5549 \else
5550 \expandafter\ltx@firstoftwo
5551 \fi
5552 }%
5553 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5554 }

5555 \def\Hy@StringLocalhost{localhost}
5556 \@onelevel@sanitize\Hy@StringLocalhost
5557 \def\Hy@CleanupFile#1{%
5558 \edef#1{#1}%
5559 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5560 }
5561 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5562 \begingroup
5563 \toks@{\endgroup}%
5564 \def\x{#1}%
5565 \ifx\x\@empty
5566 \def\x{#2}%
5567 \ifx\x\@empty
5568 \toks@{\endgroup\def#5{/#3}}%
5569 \else
5570 \@onelevel@sanitize\x
5571 \ifx\x\Hy@StringLocalhost
5572 \toks@{\endgroup\def#5{/#3}}%
5573 \fi
5574 \fi
5575 \fi
5576 \the\toks@
5577 }

```

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.

```

5578 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5579 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5580   \ifx\#1\%
5581     #2\Hy@Warning{Ignoring empty anchor}%
5582   \else
5583     \def\anchor@spot{#2#3}%
5584     \let\put@me@back\@empty
5585     \ifx\relax#2\relax
5586     \else
5587       \ifHy@nesting
5588       \else
5589         \ifcat a\noexpand#2\relax
5590         \else
5591           \ifcat 0\noexpand#2 \relax
5592           \else
5593             \typeout{Anchor start is not alphanumeric %
5594               on input line\the\inputlineno%
5595             }%
5596             \let\anchor@spot\@empty
5597             \def\put@me@back{#2#3}%
5598           \fi
5599         \fi
5600       \fi
5601     \fi
5602     \ifHy@activeanchor
5603     \anchor@spot
5604     \else
5605     \hyper@anchor{#1}%
5606     \fi
5607     \expandafter\put@me@back
5608   \fi
5609   \let\anchor@spot\@empty
5610 }
5611 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5612 \ifHy@destlabel
\hyper@newdestlabel
5613 \def\hyper@newdestlabel#1#2{%
5614   \begingroup
5615   \Hy@safe@activetrue
5616   \edef\x{\endgroup
5617     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5618   }%
5619   \x
5620 }%

```

\hyper@destlabel@hook

```
5621 \providecommand*\hyper@destlabel@hook}{}%
```

\Hy@DestRename

```
5622 \newcommand*\Hy@DestRename}[2]{%
5623   \ltx@ifundefined{HyDL!#1}{%
5624     \begingroup
5625       \Hy@safe@activetrue
5626       \edef\dest@name{#1}%
5627       \edef\label@name{#2}%
5628       \hyper@destlabel@hook
5629       \Hy@IsNotEmpty{dest@name}{%
5630         \Hy@IsNotEmpty{label@name}{%
5631           \global\expandafter
5632             \let\csname HyDL!#1\endcsname\ltx@empty
5633           \if@files
5634             \protected@write\@auxout{}{%
5635               \string\hyper@newdestlabel
5636                 {#1}%
5637                 {\label@name}%
5638             }%
5639           \fi
5640         }%
5641       }%
5642     \endgroup
5643   }}%
5644 }
```

\HyperDestRename

```
5645 \newcommand*\HyperDestRename}[2]{%
5646   \AtBeginDocument{%
5647     \Hy@DestRename{#1}{#2}%
5648   }%
5649 }%
5650 \AtBeginDocument{%
5651   \let\HyperDestRename\Hy@DestRename
5652 }%
```

\Hy@IsNotEmpty

```
5653 \def\Hy@IsNotEmpty#1{%
5654   \ltx@ifundefined{#1}\ltx@gobble{%
5655     \expandafter\ifx\csname#1\endcsname\ltx@empty
5656     \expandafter\ltx@gobble
5657   \else
5658     \expandafter\ltx@firstofone
5659   \fi
5660 }%
5661 }%

5662 \ltx@GlobalAppendToMacro\label@hook{%
5663   \HyperDestRename\@currentHref\label@name
5664 }%
```

\HyperDestLabelReplace

```
5665 \def\HyperDestLabelReplace#1{%
5666   \ltx@ifundefined{HyDL@#1}{%
5667     #1%
```

```

5668   }{%
5669     \csname HyDL@#1\endcsname
5670   }%
5671 }%

```

`\HyperDestNameFilter`

```

5672 \let\HyperDestNameFilter\HyperDestLabelReplace

5673 \else

```

`\hyper@newdestlabel`

```

5674 \let\hyper@newdestlabel\ltx@gobbletwo

```

`\HyperDestLabelReplace`

```

5675 \let\HyperDestLabelReplace\ltx@firstofone

```

`\HyperDestRename`

`@gobbletwo`

```

5676 \fi

5677 \Hy@DisableOption{destlabel}

```

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

```

5678 \AddLineBeginAux{%
5679   \string\providecommand\string\hyper@newdestlabel[2]{}%
5680 }

```

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.

```

5681 \let\htmladding\hyperimage

5682 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5683 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5684 \def\htmlref#1#2{% anchor text, label
5685   \label@hyperref[{#2}]{#1}%
5686 }

```

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.

```

5687 \def\@@latextohtmlX{%
5688   \let\hhyperref\hyperref
5689   \def\hyperref##1##2##3##4{% anchor text for HTML
5690     % text to print before label in print
5691     % label
5692     % post-label text in print
5693     ##2\ref{##4}##3%
5694   }%
5695 }

```

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.

```
5696 \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

```
5697 \def\HyField@NewFlag#1#2{%
5698   \lowercase{\HyField@NewOption{#2}}%
5699   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5700 }
```

\HyField@NewFlagOnly

```
5701 \def\HyField@NewFlagOnly#1#2{%
5702   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5703 }
```

\HyField@NewOption #1: option name

```
5704 \def\HyField@NewOption#1{%
5705   \expandafter\newif\csname ifFld@#1\endcsname
5706   \define@key{Field}{#1}[true]{%
5707     \lowercase{\Field@boolkey{##1}}{#1}%
5708   }%
5709 }
```

\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

```
5710 \def\HyField@NewBitsetFlag#1#2#3#4{%
5711   \begingroup
5712   \count@=#4\relax
5713   \advance\count@\m@ne
5714   \def\x##1{%
5715     \endgroup
5716     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5717     \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5718       \expandafter\edef\csname HyField@#3@#1\endcsname{%
5719         (\number#4) #2%
5720       }%
5721     }
```

```

5721     \else
5722     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5723     \csname HyField@#3@##1\endcsname
5724     /#2%
5725     }%
5726     \fi
5727     }%
5728 \expandafter\x\expandafter{\the\count@}%
5729 }

\HyField@UseFlag The bit set is HyField@#1
5730 \def\HyField@UseFlag#1#2{%
5731 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5732 }

\HyField@@UseFlag
5733 \def\HyField@@UseFlag#1#2{%
5734 \bitsetSetValue{HyField@#2}{%
5735 \csname HyField@#2@#1\endcsname
5736 }{%
5737 \csname ifFld@#1\endcsname 1\else 0\fi
5738 }%
5739 }

\HyField@SetFlag The bit set is HyField@#1
5740 \def\HyField@SetFlag#1#2{%
5741 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5742 }

\HyField@@SetFlag
5743 \def\HyField@@SetFlag#1#2{%
5744 \bitsetSetValue{HyField@#2}{%
5745 \csname HyField@#2@#1\endcsname
5746 }{1}%
5747 }

\HyField@PrintFlags
5748 \def\HyField@PrintFlags#1#2{%
5749 \ifHy@verbose
5750 \begingroup
5751 \let\Hy@temp\@empty
5752 \let\MessageBreak\relax
5753 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5754 \bitsetGetSetBitList{HyField@#1}\do{%
5755 \edef\Hy@temp{%
5756 \Hy@temp
5757 \csname HyField@#1@\x\endcsname\MessageBreak
5758 }%
5759 }%
5760 \edef\x{\endgroup
5761 \noexpand\Hy@Info{%
5762 Field flags: %
5763 \expandafter\ifx\@car#1\@nil S\else/\fi
5764 #1 %
5765 \bitsetGetDec{HyField@#1} %
5766 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5767 \Hy@temp

```

```

5768     for #2%
5769     }%
5770   }\x
5771   \fi
5772 }

```

20.1.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5773 \HyField@NewFlag{Ff}{ReadOnly}{1}
5774 \HyField@NewFlag{Ff}{Required}{2}
5775 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5776 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5777 \HyField@NewFlag{Ff}{Radio}{16}
5778 \HyField@NewFlag{Ff}{Pushbutton}{17}
5779 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5780 \HyField@NewFlag{Ff}{Multiline}{13}
5781 \HyField@NewFlag{Ff}{Password}{14}
5782 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5783 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5784 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5785 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5786 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5787 \HyField@NewFlag{Ff}{Combo}{18}
5788 \HyField@NewFlag{Ff}{Edit}{19}
5789 \HyField@NewFlag{Ff}{Sort}{20}
5790 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5791 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5792 \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.

```

5793 \newif\ifFld@popdown
5794 \define@key{Field}{popdown}[true]{%
5795   \lowercase{\Field@boolkey{#1}}{popdown}%
5796 }

```

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.

```

5797 \HyField@NewFlag{F}{Invisible}{1}
5798 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5799 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5800 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5801 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5802 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5803 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5804 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5805 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```



```

5806 \ifHy@pdfa
5807 \def\HyField@PDFAFIagWarning#1#2{%
5808   \Hy@Warning{%
5809     PDF/A: Annotation flag `#1' must\MessageBreak
5810     be set to `#2'%
5811   }%
5812 }%
5813 \Fld@invisiblefalse
5814 \def\Fld@invisibletrue{%
5815   \HyField@PDFAFIagWarning{invisible}{false}%
5816 }%
5817 \Fld@hiddenfalse
5818 \def\Fld@hiddentruetrue{%
5819   \HyField@PDFAFIagWarning{hidden}{false}%
5820 }%
5821 \Fld@printtrue
5822 \def\Fld@printfalse{%
5823   \HyField@PDFAFIagWarning{print}{true}%
5824 }%
5825 \Fld@nozoomtrue
5826 \def\Fld@nozoomfalse{%
5827   \HyField@PDFAFIagWarning{nozoom}{true}%
5828 }%
5829 \Fld@norotatetrue
5830 \def\Fld@norotatefalse{%
5831   \HyField@PDFAFIagWarning{norotate}{true}%
5832 }%
5833 \Fld@noviewfalse
5834 \def\Fld@noviewtrue{%
5835   \HyField@PDFAFIagWarning{noview}{false}%
5836 }%
5837 \fi

```

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

```

5838 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5839 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5840 \HyField@NewFlag{Submit}{GetMethod}{4}
5841 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5842 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5843 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5844 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5845 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5846 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5847 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5848 \HyField@NewFlag{Submit}{ExclFKey}{12}
5849 \HyField@NewFlag{Submit}{EmbedForm}{14}

5850 \define@key{Field}{export}{%
5851   \lowercase{\def\Hy@temp{#1}}%
5852   \@ifundefined{Fld@export@\Hy@temp}{%
5853     \@onelevel@sanitize\Hy@temp
5854     \Hy@Error{%
5855       Unknown export format `'\Hy@temp'.\MessageBreak
5856       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5857     }%\ehc
5858   }%
5859   \let\Fld@export\Hy@temp

```

```

5860 }%
5861 }
5862 \def\Fld@export{fdf}
5863 \@namedef{Fld@export@fdf}{0}%
5864 \@namedef{Fld@export@html}{1}%
5865 \@namedef{Fld@export@xpdf}{2}%
5866 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5867 \def\HyField@FlagsSubmit{%
5868   \bitsetReset{HyField@Submit}%
5869   \ifcase\@nameuse{Fld@export@\Fld@export} %
5870     % FDF
5871     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5872     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5873     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5874     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5875     \HyField@UseFlag{Submit}{CanonicalFormat}%
5876     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5877     \HyField@UseFlag{Submit}{ExclFKey}%
5878     \HyField@UseFlag{Submit}{EmbedForm}%
5879   \or % HTML
5880     \HyField@SetFlag{Submit}{ExportFormat}%
5881     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5882     \HyField@UseFlag{Submit}{GetMethod}%
5883     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5884     \HyField@UseFlag{Submit}{CanonicalFormat}%
5885   \or % XFDF
5886     \HyField@SetFlag{Submit}{XFDF}%
5887     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5888     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5889     \HyField@UseFlag{Submit}{CanonicalFormat}%
5890   \or % PDF
5891     \HyField@SetFlag{Submit}{SubmitPDF}%
5892     \HyField@UseFlag{Submit}{GetMethod}%
5893   \fi
5894   \HyField@PrintFlags{Submit}{submit button field}%
5895   \bitsetIsEmpty{HyField@Submit}{%
5896     \let\Fld@submitflags\tx@empty
5897   }{%
5898     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5899   }%
5900 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5901 \def\HyField@FlagsAnnot#1{%
5902   \bitsetReset{HyField@F}%
5903   \HyField@UseFlag{F}{Invisible}%
5904   \HyField@UseFlag{F}{Hidden}%
5905   \HyField@UseFlag{F}{Print}%
5906   \HyField@UseFlag{F}{NoZoom}%
5907   \HyField@UseFlag{F}{NoRotate}%
5908   \HyField@UseFlag{F}{NoView}%

```

```

5909 \HyField@UseFlag{F}{Locked}%
5910 \HyField@UseFlag{F}{ToggleNoView}%
5911 \HyField@UseFlag{F}{LockedContents}%
5912 \HyField@PrintFlags{F}{#1}%
5913 \bitsetIsEmpty{HyField@F}{%
5914   \let\Fld@annotflags\ltx@empty
5915 }{%
5916   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5917 }%
5918 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5919 \def\HyField@FlagsPushButton{%
5920   \HyField@FlagsAnnot{push button field}%
5921   \bitsetReset{HyField@Ff}%
5922   \HyField@UseFlag{Ff}{ReadOnly}%
5923   \HyField@UseFlag{Ff}{Required}%
5924   \HyField@UseFlag{Ff}{NoExport}%
5925   \HyField@SetFlag{Ff}{Pushbutton}%
5926   \HyField@PrintFlags{Ff}{push button field}%
5927   \bitsetIsEmpty{HyField@Ff}{%
5928     \let\Fld@flags\ltx@empty
5929   }{%
5930     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5931   }%
5932 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5933 \def\HyField@FlagsCheckBox{%
5934   \HyField@FlagsAnnot{check box field}%
5935   \bitsetReset{HyField@Ff}%
5936   \HyField@UseFlag{Ff}{ReadOnly}%
5937   \HyField@UseFlag{Ff}{Required}%
5938   \HyField@UseFlag{Ff}{NoExport}%
5939   \HyField@PrintFlags{Ff}{check box field}%
5940   \bitsetIsEmpty{HyField@Ff}{%
5941     \let\Fld@flags\ltx@empty
5942   }{%
5943     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5944   }%
5945 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5946 \def\HyField@FlagsRadioButton{%
5947   \HyField@FlagsAnnot{radio button field}%
5948   \bitsetReset{HyField@Ff}%
5949   \HyField@UseFlag{Ff}{ReadOnly}%
5950   \HyField@UseFlag{Ff}{Required}%
5951   \HyField@UseFlag{Ff}{NoExport}%
5952   \HyField@UseFlag{Ff}{NoToggleToOff}%
5953   \HyField@SetFlag{Ff}{Radio}%

```

```

5954 \HyField@UseFlag{Ff}{RadiosInUnison}%
5955 \HyField@PrintFlags{Ff}{radio button field}%
5956 \bitsetIsEmpty{HyField@Ff}{%
5957   \let\Fld@flags\ltx@empty
5958 }{%
5959   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5960 }%
5961 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5962 \def\HyField@FlagsText{%
5963   \HyField@FlagsAnnot{text field}%
5964   \bitsetReset{HyField@Ff}%
5965   \HyField@UseFlag{Ff}{ReadOnly}%
5966   \HyField@UseFlag{Ff}{Required}%
5967   \HyField@UseFlag{Ff}{NoExport}%
5968   \HyField@UseFlag{Ff}{Multiline}%
5969   \HyField@UseFlag{Ff}{Password}%
5970   \HyField@UseFlag{Ff}{FileSelect}%
5971   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5972   \HyField@UseFlag{Ff}{DoNotScroll}%
5973   \ifFld@comb
5974     \ifcase0\ifFld@multiline
5975       \else\ifFld@password
5976       \else\ifFld@fileselect
5977       \else 1\fi\fi\fi\relax
5978     \Hy@Error{%
5979       Field option `comb' cannot used together with\MessageBreak
5980       `multiline', `password', or `fileselect'%
5981     }\@ehc
5982   \else
5983     \HyField@UseFlag{Ff}{Comb}%
5984   \fi
5985 \fi
5986 \HyField@UseFlag{Ff}{RichText}%
5987 \HyField@PrintFlags{Ff}{text field}%
5988 \bitsetIsEmpty{HyField@Ff}{%
5989   \let\Fld@flags\ltx@empty
5990 }{%
5991   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5992 }%
5993 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5994 \def\HyField@FlagsChoice{%
5995   \HyField@FlagsAnnot{choice field}%
5996   \bitsetReset{HyField@Ff}%
5997   \HyField@UseFlag{Ff}{ReadOnly}%
5998   \HyField@UseFlag{Ff}{Required}%
5999   \HyField@UseFlag{Ff}{NoExport}%
6000   \HyField@UseFlag{Ff}{Combo}%
6001   \ifFld@combo
6002     \HyField@UseFlag{Ff}{Edit}%

```

```

6003 \fi
6004 \HyField@UseFlag{Ff}{Sort}%
6005 \HyField@UseFlag{Ff}{MultiSelect}%
6006 \ifFld@combo
6007   \ifFld@edit
6008     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6009   \fi
6010 \fi
6011 \HyField@UseFlag{Ff}{CommitOnSelChange}%
6012 \HyField@PrintFlags{Ff}{choice field}%
6013 \bitsetIsEmpty{HyField@Ff}{%
6014   \let\Fld@flags\ltx@empty
6015 }{%
6016   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6017 }%
6018 }

```

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`.

```

6019 \def\HyField@PDFChoices#1{%
6020   \begingroup
6021     \global\let\Fld@choices\ltx@empty
6022     \let\HyTmp@optlist\ltx@empty
6023     \let\HyTmp@optitem\relax
6024     \count@=0 %
6025     \kv@parse{#1}{%
6026       \Hy@pdfstringdef\kv@key\kv@key
6027       \ifx\kv@value\relax
6028         \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6029           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
6030         \else
6031           \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6032         \fi
6033       \else
6034         \Hy@pdfstringdef\kv@value\kv@value
6035         \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
6036       \fi
6037     \edef\HyTmp@optlist{%
6038       \HyTmp@optlist
6039       \HyTmp@optitem{\the\count@}{\kv@key}0%
6040     }%
6041     \advance\count@ by 1 %
6042     \@gobbletwo
6043   }%
6044   \xdef\Fld@choices{/Opt[\Fld@choices]}%
6045   \ifFld@multiselect
6046     \HyField@@PDFChoices{DV}\Fld@default
6047     \HyField@@PDFChoices{V}\Fld@value
6048   \else
6049     \ifx\Fld@default\relax
6050     \else
6051       \pdfstringdef\Hy@gtemp\Fld@default
6052       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%

```

```

6053 \fi
6054 \ifx\Fld@value\relax
6055 \else
6056 \pdfstringdef\Hy@gtemp\Fld@value
6057 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6058 \fi
6059 \fi
6060 \endgroup
6061 }

```

\HyField@@PDFChoices

```

6062 \def\HyField@@PDFChoices#1#2{%
6063 \ifx#2\relax
6064 \else
6065 \count@=0 %
6066 \def\HyTmp@optitem##1##2##3{%
6067 \def\HyTmp@key{##2}%
6068 \ifx\HyTmp@key\Hy@gtemp
6069 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6070 \HyTmp@optlist
6071 \HyTmp@optitem{##1}{##2}1%
6072 }%
6073 \let\HyTmp@found=Y%
6074 \else
6075 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6076 \HyTmp@optlist
6077 \HyTmp@optitem{##1}{##2}##3%
6078 }%
6079 \fi
6080 }%
6081 \expandafter\comma@parse\expandafter{#2}{%
6082 \pdfstringdef\Hy@gtemp\comma@entry
6083 \let\HyTmp@found=N %
6084 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6085 \HyTmp@optlist
6086 \ifx\HyTmp@found Y%
6087 \advance\count@ by 1 %
6088 \else
6089 \@onelevel@sanitize\comma@entry
6090 \PackageWarning{hyperref}{%
6091 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6092 \MessageBreak
6093 it cannot be found in the choices%
6094 }%
6095 \fi
6096 \@gobble
6097 }%
6098 \def\HyTmp@optitem##1##2##3{%
6099 \ifnum##3=1 %
6100 (##2)%
6101 \fi
6102 }%
6103 \ifcase\count@
6104 \or
6105 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6106 \else
6107 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6108 \ifx#1V%

```

```

6109     \def\HyTmp@optitem##1##2##3{%
6110         \ifnum##3=1 %
6111             \@firstofone{ ##1}%
6112         \fi
6113     }%
6114     \edef\HyTmp@optlist{\HyTmp@optlist}%
6115     \xdef\Fld@choices{%
6116         \Fld@choices
6117         /I[\expandafter\@firstofone\HyTmp@optlist]%
6118     }%
6119     \fi
6120 \fi
6121 \fi
6122 }

```

20.3 Forms

\HyField@SetKeys

```

6123 \def\HyField@SetKeys{%
6124     \kvsetkeys{Field}%
6125 }

6126 \newif\ifFld@checked
6127 \newif\ifFld@disabled
6128 \Fld@checkedfalse
6129 \Fld@disabledfalse
6130 \newcount\Fld@menulength
6131 \newdimen\Fld@Width
6132 \newdimen\Fld@charsize
6133 \Fld@charsize=10\p@
6134 \def\Fld@maxlen{0}
6135 \def\Fld@align{0}
6136 \def\Fld@color{0 0 0 rg}
6137 \def\Fld@bcolor{1 1 1}
6138 \def\Fld@bordercolor{1 0 0}
6139 \def\Fld@bordersep{1\p@}
6140 \def\Fld@borderwidth{1}
6141 \def\Fld@borderstyle{S}
6142 \def\Fld@cbsymbol{4}
6143 \def\Fld@radiosymbol{H}
6144 \def\Fld@rotation{0}
6145 \def\Fld@Form{\@ifnextchar[{\@Form}{\@Form[]}}
6146 \def\Fld@endForm{\@endForm}
6147 \newif\ifForm@html
6148 \Form@htmlfalse
6149 \def\Fld@boolkey#1#2{%
6150     \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6151 }
6152 \define@key{Form}{action}{%
6153     \hyper@normalise\Hy@DefFormAction{#1}%
6154 }
6155 \def\Hy@DefFormAction{\def\Fld@action}
6156 \def\Fld@enc@html{html}
6157 \define@key{Form}{encoding}{%
6158     \def\Hy@tempa{#1}%
6159     \ifx\Hy@tempa\enc@html
6160         \Form@htmltrue

```

```

6161 \def\Fld@export{html}%
6162 \else
6163 \Hy@Warning{%
6164   Form `encoding' key with \MessageBreak
6165   unknown value `#1'%
6166 }%
6167 \Form@htmlfalse
6168 \fi
6169 }
6170 \define@key{Form}{method}{%
6171 \lowercase{\def\Hy@temp{#1}}%
6172 \@ifundefined{Form@method@\Hy@temp}{%
6173 \onelevel@sanitize\Hy@temp
6174 \Hy@Error{%
6175   Unknown method ``\Hy@temp'.\MessageBreak
6176   Known values are `post' and `get'%
6177 } \@ehc
6178 }{%
6179 \let\Form@method\Hy@temp
6180 \ifcase\@nameuse{Form@method@\Hy@temp} %
6181 \Fld@getmethodfalse
6182 \else
6183 \Fld@getmethodtrue
6184 \fi
6185 }%
6186 }
6187 \def\Form@method{
6188 \@namedef{Form@method@post}{0}
6189 \@namedef{Form@method@get}{1}

6190 \newif\ifHyField@NeedAppearances
6191 \def\HyField@NeedAppearancesfalse{%
6192 \global\let\ifHyField@NeedAppearances\iffalse
6193 }
6194 \def\HyField@NeedAppearancetrue{%
6195 \global\let\ifHyField@NeedAppearances\iftrue
6196 }
6197 \HyField@NeedAppearancetrue
6198 \define@key{Form}{NeedAppearances}[true]{%
6199 \edef\Hy@tempa{#1}%
6200 \ifx\Hy@tempa\Hy@true
6201 \HyField@NeedAppearancetrue
6202 \else
6203 \ifx\Hy@tempa\Hy@false
6204 \HyField@NeedAppearancesfalse
6205 \else
6206 \Hy@Error{%
6207   Unexpected value ``\Hy@tempa'\MessageBreak
6208   of option `NeedAppearances' instead of\MessageBreak
6209   `true' or `false'%
6210 } \@ehc
6211 \fi
6212 \fi
6213 }
6214 \def\Field@boolkey#1#2{%
6215 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6216 }
6217 \ifHy@texht

```



```

6218 \newtoks\Field@toks
6219 \Field@toks={ }%
6220 \def\Field@addtoks#1#2{%
6221   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6222   \@processme
6223 }%
6224 \else
6225 \def\Hy@WarnHTMLFieldOption#1{%
6226   \Hy@Warning{%
6227     HTML field option `#1'\MessageBreak
6228     is ignored%
6229   }%
6230 }%
6231 \fi
6232 \def\Fld@checkequals#1=#2=#3\\{%
6233 \def\@currDisplay{#1}%
6234 \ifx\\#2\\%
6235   \def\@currValue{#1}%
6236 \else
6237   \def\@currValue{#2}%
6238 \fi
6239 }
6240 \define@key{Field}{loc}{%
6241   \def\Fld@loc{#1}%
6242 }
6243 \define@key{Field}{checked}[true]{%
6244   \lowercase{\Field@boolkey{#1}}{checked}%
6245 }
6246 \define@key{Field}{disabled}[true]{%
6247   \lowercase{\Field@boolkey{#1}}{disabled}%
6248 }
6249 \ifHy@texht
6250 \define@key{Field}{accesskey}{%
6251   \Field@addtoks{accesskey}{#1}%
6252 }%
6253 \define@key{Field}{tabkey}{%
6254   \Field@addtoks{tabkey}{#1}%
6255 }%
6256 \else
6257 \define@key{Field}{accesskey}{%
6258   \Hy@WarnHTMLFieldOption{accesskey}%
6259 }%
6260 \define@key{Field}{tabkey}{%
6261   \Hy@WarnHTMLFieldOption{tabkey}%
6262 }%
6263 \fi
6264 \define@key{Field}{name}{%
6265   \def\Fld@name{#1}%
6266 }
6267 \let\Fld@altname\relax
6268 \define@key{Field}{altname}{%
6269   \def\Fld@altname{#1}%
6270 }
6271 \let\Fld@mappingname\relax
6272 \define@key{Field}{mappingname}{%
6273   \def\Fld@mappingname{#1}%
6274 }

```

```

6275 \define@key{Field}{width}{%
6276   \def\Fld@width{#1}%
6277   \Field@Width#1\setbox0=\hbox{m}%
6278 }
6279 \define@key{Field}{maxlen}{%
6280   \def\Fld@maxlen{#1}%
6281 }
6282 \define@key{Field}{menulength}{%
6283   \Fld@menulength=#1\relax
6284 }
6285 \define@key{Field}{height}{%
6286   \def\Fld@height{#1}%
6287 }
6288 \define@key{Field}{charsize}{%
6289   \setlength{\Fld@charsize}{#1}%
6290 }
6291 \define@key{Field}{borderwidth}{%
6292   \Hy@defaultbp\Fld@borderwidth{#1}%
6293 }
6294 \def\Hy@defaultbp#1#2{%
6295   \begingroup
6296   \afterassignment\Hy@defaultbpAux
6297   \dimen@=#2bp\relax{#1}{#2}%
6298 }
6299 \begingroup\expandafter\expandafter\expandafter\endgroup
6300 \expandafter\ifx\csname dimexpr\endcsname\relax
6301   \def\Hy@defaultbpAux#1\relax#2#3{%
6302     \ifx!#1!%
6303       \endgroup
6304       \def#2{#3}%
6305     \else
6306       \dimen@=.99626\dimen@
6307       \edef\x{\endgroup
6308         \def\noexpand#2{%
6309           \strip@pt\dimen@
6310         }%
6311       }\x
6312     \fi
6313   }%
6314 \else
6315   \def\Hy@defaultbpAux#1\relax#2#3{%
6316     \ifx!#1!%
6317       \endgroup
6318       \def#2{#3}%
6319     \else
6320       \edef\x{\endgroup
6321         \def\noexpand#2{%
6322           \strip@pt\dimexpr\dimen@*800/803\relax
6323         }%
6324       }\x
6325     \fi
6326   }%
6327 \fi
6328 \define@key{Field}{borderstyle}{%
6329   \let\Hy@temp\Fld@borderstyle
6330   \def\Fld@borderstyle{#1}%
6331   \Hy@Match\Fld@borderstyle{}{

```

```

6332   ^[SDBIU]$%
6333 }{}{%
6334   \Hy@Warning{%
6335     Invalid value ` \@pdfborderstyle'\MessageBreak
6336     for option `pdfborderstyle'. Valid values:\MessageBreak
6337     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6338     \space\space I (Inset), U (Underline)\MessageBreak
6339     Option setting is ignored%
6340   }%
6341   \let\Fld@borderstyle\Hy@temp
6342 }%
6343 }
6344 \define@key{Field}{bordersep}{%
6345   \def\Fld@bordersep{#1}%
6346 }
6347 \define@key{Field}{default}{%
6348   \def\Fld@default{#1}%
6349 }
6350 \define@key{Field}{align}{%
6351   \def\Fld@align{#1}%
6352 }
6353 \define@key{Field}{value}{%
6354   \Hy@pdfstringdef\Fld@value{#1}%
6355 }
6356 \define@key{Field}{checkboxsymbol}{%
6357   \Fld@DingDef\Fld@cbsymbol{#1}%
6358 }
6359 \define@key{Field}{radiosymbol}{%
6360   \Fld@DingDef\Fld@radiosymbol{#1}%
6361 }
6362 \def\Fld@DingDef#1#2{%
6363   \let\Fld@temp\ltx@empty
6364   \Fld@@@DingDef#2\ding{}\@nil
6365   \let#1\Fld@temp
6366 }
6367 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6368   \expandafter\def\expandafter\Fld@temp\expandafter{%
6369     \Fld@temp
6370     #1%
6371   }%
6372   \ifx\\#3\\%
6373     \expandafter\@gobble
6374   \else
6375     \begingroup
6376       \lccode`0=#2\relax
6377       \lowercase{\endgroup
6378         \expandafter\def\expandafter\Fld@temp\expandafter{%
6379           \Fld@temp
6380           0%
6381         }%
6382       }%
6383       \expandafter\@firstofone
6384     \fi
6385   {%
6386     \Fld@@@DingDef#3\@nil
6387   }%
6388 }

```

```

6389 \define@key{Field}{rotation}{%
6390   \def\Fld@rotation{#1}%
6391 }

6392 \define@key{Field}{backgroundcolor}{%
6393   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6394 }
6395 \define@key{Field}{bordercolor}{%
6396   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6397 }
6398 \define@key{Field}{color}{%
6399   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6400 }

6401 \let\Fld@onclick@code\ltx@empty
6402 \let\Fld@format@code\ltx@empty
6403 \let\Fld@validate@code\ltx@empty
6404 \let\Fld@calculate@code\ltx@empty
6405 \let\Fld@keystroke@code\ltx@empty
6406 \let\Fld@onfocus@code\ltx@empty
6407 \let\Fld@onblur@code\ltx@empty
6408 \let\Fld@onmousedown@code\ltx@empty
6409 \let\Fld@onmouseup@code\ltx@empty
6410 \let\Fld@onenter@code\ltx@empty
6411 \let\Fld@onexit@code\ltx@empty
6412 \def\Hy@temp#1{%
6413   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6414 }
6415 \def\Hy@@temp#1#2{%
6416   \ifHy@pdfa
6417     \define@key{Field}{#2}{%
6418       \Hy@Error{%
6419         PDF/A: Additional action `#2' is prohibited%
6420       } \@ehc
6421     }%
6422   \else
6423     \define@key{Field}{#2}{%
6424       \def#1{##1}%
6425     }%
6426   \fi
6427 }
6428 \Hy@temp{keystroke}
6429 \Hy@temp{format}
6430 \Hy@temp{validate}
6431 \Hy@temp{calculate}
6432 \Hy@temp{onfocus}
6433 \Hy@temp{onblur}
6434 \Hy@temp{onenter}
6435 \Hy@temp{onexit}

6436 \let\Fld@calculate@sortkey\ltx@empty
6437 \define@key{Field}{calculatesortkey}[1]{%
6438   \def\Fld@calculate@sortkey{#1}%
6439 }

6440 \ifHy@texht
6441   \def\Hy@temp#1{%
6442     \define@key{Field}{#1}{%
6443       \Field@addtoks{#1}{##1}%
6444     }%

```

```

6445 }%
6446 \else
6447 \def\Hy@temp#1{%
6448 \define@key{Field}{#1}{%
6449 \Hy@WarnHTMLFieldOption{#1}%
6450 }%
6451 }%
6452 \fi
6453 \Hy@temp{ondblclick}
6454 \Hy@temp{onmousedown}
6455 \Hy@temp{onmouseup}
6456 \Hy@temp{onmouseover}
6457 \Hy@temp{onmousemove}
6458 \Hy@temp{onmouseout}
6459 \Hy@temp{onkeydown}
6460 \Hy@temp{onkeyup}
6461 \Hy@temp{onselect}
6462 \Hy@temp{onchange}
6463 \Hy@temp{onkeypress}
6464 \ifHy@texht
6465 \define@key{Field}{onclick}{%
6466 \Field@addtoks{onclick}{#1}%
6467 }%
6468 \else
6469 \ifHy@pdfa
6470 \define@key{Field}{onclick}{%
6471 \Hy@Error{%
6472 PDF/A: Action `onclick' is prohibited%
6473 }\@ehc
6474 }%
6475 \else
6476 \define@key{Field}{onclick}{%
6477 \def\Fld@onclick@code{#1}%
6478 }%
6479 \fi
6480 \fi

6481 \DeclareRobustCommand\TextField{%
6482 \@ifnextchar[{\@TextField}{\@TextField[]}%
6483 }
6484 \DeclareRobustCommand\ChoiceMenu{%
6485 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6486 }
6487 \DeclareRobustCommand\CheckBox{%
6488 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6489 }
6490 \DeclareRobustCommand\PushButton{%
6491 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6492 }
6493 \DeclareRobustCommand\Gauge{%
6494 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6495 }
6496 \DeclareRobustCommand\Submit{%
6497 \@ifnextchar[{\@Submit}{\@Submit[]}%
6498 }
6499 \DeclareRobustCommand\Reset{%
6500 \@ifnextchar[{\@Reset}{\@Reset[]}%
6501 }

```

```

6502 \def\LayoutTextField#1#2{% label, field
6503   #1 #2%
6504 }
6505 \def\LayoutChoiceField#1#2{% label, field
6506   #1 #2%
6507 }
6508 \def\LayoutCheckField#1#2{% label, field
6509   #1 #2%
6510 }
6511 \def\LayoutPushButtonField#1{% button
6512   #1%
6513 }
6514 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6515 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6516 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6517 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6518 \def\MakeButtonField#1{%
6519   \sbox0{%
6520     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6521   }%
6522   \@tempdima\ht0 %
6523   \advance\@tempdima by \Fld@borderwidth bp %
6524   \advance\@tempdima by \Fld@borderwidth bp %
6525   \ht0\@tempdima
6526   \@tempdima\dp0 %
6527   \advance\@tempdima by \Fld@borderwidth bp %
6528   \advance\@tempdima by \Fld@borderwidth bp %
6529   \dp0\@tempdima
6530   \box0\relax
6531 }
6532 \def\DefaultHeightofSubmit{14pt}
6533 \def\DefaultWidthofSubmit{2cm}
6534 \def\DefaultHeightofReset{14pt}
6535 \def\DefaultWidthofReset{2cm}
6536 \def\DefaultHeightofCheckBox{\baselineskip}
6537 \def\DefaultWidthofCheckBox{\baselineskip}
6538 \def\DefaultHeightofChoiceMenu{\baselineskip}
6539 \def\DefaultWidthofChoiceMenu{\baselineskip}
6540 \def\DefaultHeightofText{\baselineskip}
6541 \def\DefaultHeightofTextMultiline{4\baselineskip}
6542 \def\DefaultWidthofText{3cm}
6543 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6544 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6545 \def\DefaultOptionsofPushButton{print}
6546 \def\DefaultOptionsofCheckBox{print}
6547 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
6548 \def\DefaultOptionsofListBox{print}
6549 \def\DefaultOptionsofComboBox{print,edit,sort}
6550 \def\DefaultOptionsofPopdownBox{print}
6551 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6552 \ifHy@hyperfigures
6553   \Hy@Info{Hyper figures ON}%

```

```

6554 \else
6555   \Hy@Info{Hyper figures OFF}%
6556 \fi
6557 \ifHy@nesting
6558   \Hy@Info{Link nesting ON}%
6559 \else
6560   \Hy@Info{Link nesting OFF}%
6561 \fi
6562 \ifHy@hyperindex
6563   \Hy@Info{Hyper index ON}%
6564 \else
6565   \Hy@Info{Hyper index OFF}%
6566 \fi
6567 \ifHy@backref
6568   \Hy@Info{backreferencing ON}%
6569 \else
6570   \Hy@Info{backreferencing OFF}%
6571 \fi
6572 \ifHy@colorlinks
6573   \Hy@Info{Link coloring ON}%
6574 \else
6575   \Hy@Info{Link coloring OFF}%
6576 \fi
6577 \ifHy@ocgcolorlinks
6578   \Hy@Info{Link coloring with OCG ON}%
6579 \else
6580   \Hy@Info{Link coloring with OCG OFF}%
6581 \fi
6582 \ifHy@pdfa
6583   \Hy@Info{PDF/A mode ON}%
6584 \else
6585   \Hy@Info{PDF/A mode OFF}%
6586 \fi

```

22 Low-level utility macros

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

```

6587 \edef\hyper@hash{\string#}
6588 \edef\hyper@tilde{\string~}
6589 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6590 \def\@currentHref{Doc-Start}
6591 \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.

```

6592 \Hy@AtBeginDocument{%
6593   \Hy@pdfstringtrue
6594   \PDF@SetupDoc
6595   \let\PDF@SetupDoc\@empty
6596   \Hy@DisableOption{pdfpagescrop}%
6597   \Hy@DisableOption{pdfpagemode}%
6598   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6599   \Hy@DisableOption{pdfdirection}%
6600   \Hy@DisableOption{pdfviewarea}%
6601   \Hy@DisableOption{pdfviewclip}%

```

```

6602 \Hy@DisableOption{pdfprintarea}%
6603 \Hy@DisableOption{pdfprintclip}%
6604 \Hy@DisableOption{pdfprintscaling}%
6605 \Hy@DisableOption{pdfduplex}%
6606 \Hy@DisableOption{pdfpicktraybypdfsize}%
6607 \Hy@DisableOption{pdfprintpagerange}%
6608 \Hy@DisableOption{pdfnumcopies}%
6609 \Hy@DisableOption{pdfstartview}%
6610 \Hy@DisableOption{pdfstartpage}%
6611 \Hy@DisableOption{pdftoolbar}%
6612 \Hy@DisableOption{pdfmenubar}%
6613 \Hy@DisableOption{pdfwindowui}%
6614 \Hy@DisableOption{pdfitwindow}%
6615 \Hy@DisableOption{pdfcenterwindow}%
6616 \Hy@DisableOption{pdfdisplaydoctitle}%
6617 \Hy@DisableOption{pdfpagelayout}%
6618 \Hy@DisableOption{pdflang}%
6619 \Hy@DisableOption{baseurl}%
6620 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6621 \Hy@pdfstringfalse
6622 }

```

Ignore star from referencing macros:

```

6623 \LetLtxMacro\NoHy@OrgRef\ref
6624 \DeclareRobustCommand*{\ref}{%
6625   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6626 }
6627 \LetLtxMacro\NoHy@OrgPageRef\pageref
6628 \DeclareRobustCommand*{\pageref}{%
6629   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6630 }

```

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.

```

6631 \def\NoHyper{%
6632   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6633   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6634   \global\let\hyper@livelink\hyper@link
6635   \gdef\hyper@link###1##2##3{##3\Hy@xspace@end}%
6636   \let\hyper@anchor\ltx@gobble
6637   \let\hyper@anchorstart\ltx@gobble
6638   \def\hyper@anchorend{\Hy@xspace@end}%
6639   \let\hyper@linkstart\ltx@gobbletwo
6640   \def\hyper@linkend{\Hy@xspace@end}%
6641   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6642   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6643   \let\Hy@backout\@gobble
6644 }
6645 \def@stop@hyper{%
6646   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6647   \let\Hy@backout\@gobble
6648   \let\hyper@@anchor\ltx@gobble

```



```

6649 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6650 \let\hyper@anchor\ltx@gobble
6651 \let\hyper@anchorstart\ltx@gobble
6652 \def\hyper@anchorend{\Hy@xspace@end}%
6653 \let\hyper@linkstart\ltx@gobbletwo
6654 \def\hyper@linkend{\Hy@xspace@end}%
6655 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6656 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6657 }
6658 \def\endNoHyper{%
6659 \global\let\hyper@link\hyper@livelink
6660 }
6661 \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:

```

6662 \*nohyperref
6663 \RequirePackage{letltxmacro}[2008/06/13]
6664 \let\hyper@@anchor\@gobble
6665 \def\hyper@link#1#2#3{#3}%
6666 \let\hyper@anchorstart\@gobble
6667 \let\hyper@anchorend\@empty
6668 \let\hyper@linkstart\@gobbletwo
6669 \let\hyper@linkend\@empty
6670 \def\hyper@linkurl#1#2{#1}%
6671 \def\hyper@linkfile#1#2#3{#1}%
6672 \def\hyper@link@[#1]#2#3{#1}%
6673 \let\PDF@SetupDoc\@empty
6674 \let\PDF@FinishDoc\@empty
6675 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6676 \def\Acrobatmenu#1#2{\leavevmode#2}
6677 \let\pdfstringdefDisableCommands\@gobbletwo
6678 \let\texorpdfstring\@firstoftwo
6679 \let\pdfbookmark\@undefined
6680 \newcommand\pdfbookmark[3]{}
6681 \let\phantomsection\@empty
6682 \let\hypersetup\@gobble
6683 \let\hyperbaseurl\@gobble
6684 \newcommand*{\href}[3]{}
6685 \let\hyperdef\@gobbletwo
6686 \let\hyperlink\@gobble
6687 \let\hypertarget\@gobble
6688 \def\hyperref{%
6689 \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6690 }
6691 \long\def\@gobbleopt[#1]{}
6692 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6693 \LetLtxMacro\NoHy@OrgRef\ref
6694 \DeclareRobustCommand*{\ref}{%
6695   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6696 }
6697 \LetLtxMacro\NoHy@OrgPageRef\pageref
6698 \DeclareRobustCommand*{\pageref}{%
6699   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6700 }
6701 \</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}`

```

6702 \<*package>
6703 \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.

```

6704 \if@filesw
6705   \ifHy@typexml
6706     \immediate\closeout\@mainaux
6707     \immediate\openout\@mainaux\jobname.aux\relax
6708     \immediate\write\@auxout{<relaxxml>\relax}%
6709   \fi
6710   \immediate\write\@auxout{%
6711     \string\providecommand\string\HyperFirstAtBeginDocument{%
6712       \string\AtBeginDocument}^^J%
6713     \string\HyperFirstAtBeginDocument{%
6714       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6715       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6716       \string\gdef\string\contentsline%
6717         \string#1\string#2\string#3\string#4{%
6718         \string\oldcontentsline%
6719         {\string#1}{\string#2}{\string#3}}^^J%
6720       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6721       \string\gdef\string\newlabel\string#1\string#2{%
6722       \string\newlabelxx{\string#1}\string#2}^^J%
6723       \string\gdef\string\newlabelxx%
6724         \string#1\string#2\string#3\string#4\string#5\string#6{%
6725         \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.

```

6726     \string\AtEndDocument{%
6727       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6728       \string\let\string\contentsline\string\oldcontentsline^^J%
6729       \string\let\string\newlabel\string\oldnewlabel^^J%
6730       \string\fi%
6731     }^^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.

```

6732     \string\fi%
6733   }^^J%

```

```

6734 \string\global\string\let\string\hyper@last\relax^^J%
6735 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6736 }%
6737 \fi
6738 \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.

```

6739 \ifx\hyper@last\@undefined
6740 \def\@starttoc#1{%
6741 \begingroup
6742 \makeatletter
6743 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6744 \IfFileExists{\jobname.#1}{%
6745 \Hy@WarningNoLine{%
6746 old #1 file detected, not used; run LaTeX again%
6747 }%
6748 }{}%
6749 \if@filesw
6750 \expandafter\newwrite\csname tf@#1\endcsname
6751 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6752 \fi
6753 \@nobreakfalse
6754 \endgroup
6755 }%
6756 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}{}{}}%
6757 \fi
6758 }

```

26 Title strings

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

```

6759 \ifHy@pdfusetitle
6760 \let\HyOrg@title\title
6761 \let\HyOrg@author\author
6762 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6763 \def\Hy@scanopttitle[#1]{%
6764 \gdef\Hy@title{#1}%
6765 \HyOrg@title{#1}%
6766 }%
6767 \def\Hy@scantitle#1{%
6768 \gdef\Hy@title{#1}%
6769 \HyOrg@title{#1}%
6770 }%
6771 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6772 \def\Hy@scanoptauthor[#1]{%
6773 \gdef\Hy@author{#1}%
6774 \HyOrg@author{#1}%
6775 }%
6776 \def\Hy@scanauthor#1{%
6777 \gdef\Hy@author{#1}%
6778 \HyOrg@author{#1}%

```

6779 }%

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

```

6780 \begingroup
6781 \def\process@me#1\@nil#2{%
6782 \expandafter\let\expandafter\x\csname @#2\endcsname
6783 \edef\y{\expandafter\strip@prefix\meaning\x}%
6784 \def\c##1##2\@nil{%
6785 \ifx\\##1\\%
6786 \else
6787 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6788 \expandafter{\x}%
6789 \fi
6790 }%
6791 \expandafter\c\y\relax#1\@nil
6792 }%
6793 \expandafter\process@me\string\@latex@\@nil{title}%
6794 \expandafter\process@me\string\@latex@\@nil{author}%
6795 \endgroup
6796 \fi
6797 \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.

```

6798 \def\Hy@UseMaketitleString#1{%
6799 \ltx@ifundefined{Hy@#1}{-}{%
6800 \begingroup
6801 \let\Hy@saved@hook\pdfstringdefPreHook
6802 \pdfstringdefDisableCommands{%
6803 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6804 \let\newline\\%
6805 \def\and{; }%
6806 }%
6807 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6808 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6809 \csname Hy@#1\endcsname\@empty
6810 }%
6811 \fi
6812 \global\let\pdfstringdefPreHook\Hy@saved@hook
6813 \endgroup
6814 }%
6815 }
6816 \def\Hy@newline@title#1{ #1}
6817 \def\Hy@newline@author#1{, #1}
6818 \def\Hy@UseMaketitleInfos{%
6819 \Hy@UseMaketitleString{title}%
6820 \Hy@UseMaketitleString{author}%
6821 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```
6822 \RequirePackage{atbegshi}[2007/09/09]
6823 \let\Hy@EveryPageHook\ltx@empty
6824 \let\Hy@EveryPageBoxHook\ltx@empty
6825 \let\Hy@FirstPageHook\ltx@empty
6826 \AtBeginShipout{%
6827   \Hy@EveryPageHook
6828   \ifx\Hy@EveryPageBoxHook\ltx@empty
6829     \else
6830       \setbox\AtBeginShipoutBox=\vbox{%
6831         \offinterlineskip
6832         \Hy@EveryPageBoxHook
6833         \box\AtBeginShipoutBox
6834       }%
6835     \fi
6836 }
6837 \ltx@iffileloaded{hpdfetex.def}{%
6838   \AtBeginShipout{%
6839     \Hy@FirstPageHook
6840     \global\let\Hy@FirstPageHook\ltx@empty
6841   }%
6842 }{%
6843   \AtBeginShipoutFirst{%
6844     \Hy@FirstPageHook
6845   }%
6846 }
6847 \g@addto@macro\Hy@FirstPageHook{%
6848   \PDF@FinishDoc
6849   \global\let\PDF@FinishDoc\ltx@empty
6850 }
```

28.1 PDF /PageLabels

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

```
6851 \ifHy@pdfpagelabels
6852   \begingroup\expandafter\expandafter\expandafter\endgroup
6853   \expandafter\ifx\csname thepage\endcsname\relax
6854     \Hy@pdfpagelabelsfalse
6855     \Hy@WarningNoLine{%
6856       Option `pdfpagelabels' is turned off\MessageBreak
6857       because \string\thepage\space is undefined%
6858     }%
6859     \csname fi\endcsname
6860     \csname iffalse\expandafter\endcsname
6861   \fi
```

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

```
6862 \def\thispdfpagelabel#1{%
6863   \gdef\HyPL@thisLabel{#1}%
6864 }%
6865 \global\let\HyPL@thisLabel\relax
```

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

```
6866 \let\HyPL@Labels\ltx@empty
```

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

```
6867 \newcount\Hy@abspage
6868 \Hy@abspage=0 %
```

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

```
6869 \def\HyPL@LastType{init}%
6870 \def\HyPL@LastNumber{0}%
6871 \let\HyPL@LastPrefix\ltx@empty
```

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

```
6872 \def\HyPL@arabic{D}%
6873 \def\HyPL@Roman{R}%
6874 \def\HyPL@roman{r}%
6875 \def\HyPL@Alph{A}%
6876 \def\HyPL@alph{a}%

6877 \let\HyPL@SlidesSetPage\ltx@empty
6878 \ltx@ifclassloaded{slides}{%
6879   \def\HyPL@SlidesSetPage{%
6880     \advance\c@page\ltx@one
6881     \ifnum\value{page}>\ltx@one
6882       \protected@edef\HyPL@SlidesOptionalPage{%
6883         \Hy@SlidesFormatOptionalPage{thepage}%
6884       }%
6885     \else
6886       \let\HyPL@SlidesOptionalPage\ltx@empty
6887     \fi
6888     \advance\c@page-\ltx@one
6889     \def\HyPL@page{%
6890       \csname the\Hy@SlidesPage\endcsname
6891       \HyPL@SlidesOptionalPage
6892     }%
6893   }%
6894 }{}
```

`\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.

```
6895 \def\HyPL@EveryPage{%
6896   \begingroup
6897   \ifx\HyPL@thisLabel\relax
6898     \let\HyPL@page\thepage
6899     \HyPL@SlidesSetPage
6900   \else
6901     \let\HyPL@page\HyPL@thisLabel
6902     \global\let\HyPL@thisLabel\relax
6903   \fi
6904   \let\HyPL@Type\relax
6905   \ifnum\c@page>0 %
6906     \ifx\HyPL@SlidesSetPage\ltx@empty
6907       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6908     \fi
6909   \fi
6910   \let\Hy@temp Y%
6911   \ifx\HyPL@Type\HyPL@LastType
```

```

6912 \else
6913 \let\Hy@temp N%
6914 \fi
6915 \ifx\HyPL@Type\relax
6916 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6917 \else
6918 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6919 \fi
6920 \ifx\HyPL@Prefix\HyPL@LastPrefix
6921 \else
6922 \let\Hy@temp N%
6923 \fi
6924 \if Y\Hy@temp
6925 \advance\c@page by -1 %
6926 \ifnum\HyPL@LastNumber=\the\c@page\relax
6927 \else
6928 \let\Hy@temp N%
6929 \fi
6930 \Hy@StepCount\c@page
6931 \fi
6932 \if N\Hy@temp
6933 \ifx\HyPL@Type\relax
6934 \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
6935 \else
6936 \HyPL@storePageLabel{%
6937 \ifx\HyPL@Prefix\@empty
6938 \else
6939 /P(\HyPL@Prefix)%
6940 \fi
6941 /S/\csname HyPL\HyPL@Type\endcsname
6942 \ifnum\the\c@page=1 %
6943 \else
6944 \space/St \the\c@page
6945 \fi
6946 }%
6947 \fi
6948 \fi
6949 \xdef\HyPL@LastNumber{\the\c@page}%
6950 \global\let\HyPL@LastType\HyPL@Type
6951 \global\let\HyPL@LastPrefix\HyPL@Prefix
6952 \endgroup
6953 \Hy@GlobalStepCount\Hy@abspage
6954 }%

```

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

```

6955 \def\HyPL@CheckThePage#1\@nil{%
6956 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6957 }%

```

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

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

```

6958 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6959 \def\Hy@tempa{#4}%
6960 \def\Hy@tempb{\csname\endcsname\c@page}%

```

```

6961 \ifx\Hy@tempa\Hy@tempb
6962 \expandafter\ifx\csname HyPL#3\endcsname\relax
6963 \else
6964 \def\HyPL@Type{#3}%
6965 \def\HyPL@Prefix{#2}%
6966 \fi
6967 \else
6968 \begingroup
6969 \let\Hy@next\endgroup
6970 \let\HyPL@found\@undefined
6971 \def\arabic{\HyPL@Format{arabic}}%
6972 \def\Roman{\HyPL@Format{Roman}}%
6973 \def\roman{\HyPL@Format{roman}}%
6974 \def\Alph{\HyPL@Format{Alph}}%
6975 \def\alph{\HyPL@Format{alph}}%
6976 \protected@edef\Hy@temp{#1}%
6977 \ifx\HyPL@found\relax
6978 \toks@{\expandafter{\Hy@temp}}%
6979 \edef\Hy@next{\endgroup
6980 \noexpand\HyPL@@@CheckThePage\the\toks@
6981 \noexpand\HyPL@found\relax\noexpand\@nil
6982 }%
6983 \fi
6984 \Hy@next
6985 \fi
6986 }%

```

\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`.

```

6987 \def\HyPL@Format#1#2{%
6988 \ifx\HyPL@found\@undefined
6989 \expandafter\ifx\csname c@#2\endcsname\c@page
6990 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6991 \else
6992 \expandafter\noexpand\csname#1\endcsname{#2}%
6993 \fi
6994 \else
6995 \expandafter\noexpand\csname#1\endcsname{#2}%
6996 \fi
6997 }%

```

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

```

6998 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6999 \def\Hy@tempa{#3}%
7000 \def\Hy@tempb{\HyPL@found\relax}%
7001 \ifx\Hy@tempa\Hy@tempb
7002 \def\HyPL@Type{#2}%
7003 \def\HyPL@Prefix{#1}%
7004 \fi
7005 }%

```

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

```

7006 \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`.

```
7007 \def\HyPL@Useless{0<</S/D>>}%
7008 \@onelevel@sanitize\HyPL@Useless
```

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

```
7009 \def\HyPL@SetPageLabels{%
7010   \@onelevel@sanitize\HyPL@Labels
7011   \ifx\HyPL@Labels\@empty
7012   \else
7013     \ifx\HyPL@Labels\HyPL@Useless
7014     \else
7015       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7016     \fi
7017   \fi
7018 }%
```

```
7019 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7020 \fi
```

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

```
7021 \Hy@DisableOption{pdfpagelabels}
7022 </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`

```
7023 <*\pdfTeX>
7024 \pdf@ifdraftmode{%
7025   \let\Hy@PutCatalog\ltx@gobble
7026 }{%
7027   \let\Hy@PutCatalog\pdfcatalog
7028 }
7029 </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.

```
7030 <*\vTeX>
7031 \providecommand*\XR@ext{}{pdf}
7032 \edef\Hy@VTeXversion{%
7033   \ifx\VTeXversion\@undefined
7034     \z@
7035   \else
7036     \ifx\VTeXversion\relax
7037     \z@
7038   \else
7039     \VTeXversion
7040   \fi
7041 \fi
```

```

7042 }
7043 \begingroup
7044 \ifnum\Hy@VTeXversion<660 %
7045   \gdef\Hy@PutCatalog#1{%
7046     \Hy@WarningNoLine{%
7047       VTeX 6.59g or above required for pdfpagelabels%
7048     }%
7049   }%
7050 \else
7051   \gdef\Hy@PutCatalog#1{%
7052     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7053   }%
7054   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7055     \ifx\#2\%
7056       \else
7057         \immediate\special{!pdfpagelabels #2}%
7058       \fi
7059     }%
7060   \fi
7061 \endgroup
7062 \<vtex>

7063 \<*pdftex|vtex>

```

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

```

7064 \ifHy@pdfpagelabels
7065   \def\HyPL@StorePageLabel#1{%
7066     \toks@\expandafter{\HyPL@Labels}%
7067     \xdef\HyPL@Labels{%
7068       \the\toks@
7069       \the\Hy@abspage<<#1>>%
7070     }%
7071   }%

```

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.

```

7072 \RequirePackage{atveryend}[2009/12/07]%
7073 \AtVeryEndDocument{%
7074   \HyPL@SetPageLabels
7075 }%

7076 \fi
7077 \</pdftex|vtex>

```

28.1.2 xetex

```

7078 \<*xetex>
7079 \HyPsd@LoadUnicode
7080 \Hy@unicodetrue
7081 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7082 \else
7083   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7084 \fi
7085 \HyPsd@LoadStringEnc
7086 \define@key{Hyp}{unicode}[true]{%
7087   \Hy@boolkey{unicode}{#1}%
7088   \ifHy@unicode

```

```

7089 \else
7090   \Hy@Warning{%
7091     XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7092     option setting `unicode=false'%
7093   }%
7094   \Hy@unicodetrue
7095 \fi
7096 }
7097 \define@key{Hyp}{pdfencoding}{%
7098   \edef\HyPsd@temp{#1}%
7099   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7100     \let\HyPsd@pdfencoding\HyPsd@temp
7101   \else
7102     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7103       \let\HyPsd@pdfencoding\HyPsd@temp
7104     \else
7105       \Hy@Warning{%
7106         XeTeX driver only supports\MessageBreak
7107         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7108         setting `pdfencoding=\HyPsd@temp'%
7109       }%
7110     \fi
7111   \fi
7112 }
7113 \let\HyXeTeX@CheckUnicode\relax
7114 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7115 \<pdfmarkbase>
7116 \begingroup
7117   \@ifundefined{headerps@out}{-}{%
7118     \toks@\expandafter{\Hy@FirstPageHook}%
7119     \xdef\Hy@FirstPageHook{%
7120       \noexpand\headerps@out{%
7121         systemdict /pdfmark known%
7122         {%
7123           userdict /?pdfmark systemdict /exec get put%
7124         }{%
7125           userdict /?pdfmark systemdict /pop get put %
7126           userdict /pdfmark systemdict /cleartomark get put%
7127         }%
7128         ifelse%
7129       }%
7130       \the\toks@
7131     }%
7132   }%
7133 \endgroup
7134 \</pdfmarkbase>

```

\Hy@PutCatalog

```

7135 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
7136 \<pdfmarkbase>
7137 \def\Hy@PutCatalog#1{%
7138   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7139 }
7140 \</pdfmarkbase>

7141 \<pdfmarkbase | dvipdfm | xetex>

```

```
7142 \ifHy@pdfpagelabels
```

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

```
7143 \def\HyPL@StorePageLabel#1{%
7144   \if@filesw
7145   \begingroup
7146     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7147     \immediate\write\@mainaux{%
7148       \string\HyPL@Entry{\Hy@tempa}%
7149     }%
7150   \endgroup
7151   \fi
7152 }%
```

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.

```
7153 \Hy@AtBeginDocument{%
7154   \if@filesw
7155     \immediate\write\@mainaux{%
7156       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7157     }%
7158   \fi
7159   \ifx\HyPL@Labels\@empty
7160     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7161   \else
7162     \HyPL@SetPageLabels
7163   \fi
7164   \let\HyPL@Entry\@gobble
7165 }%
```

`\HyPL@Entry`

```
7166 \def\HyPL@Entry#1{%
7167   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7168     \HyPL@Labels
7169     #1%
7170   }%
7171 }%

7172 \fi
7173 </pdfmarkbase | dvipdfm | xetex>

7174 <*package>

7175 \ifx\MaybeStopEarly\relax
7176 \else
7177   \Hy@stoppedearlytrue
7178   \expandafter\MaybeStopEarly
7179 \fi
7180 \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

```

7181 \def\Hy@CounterExists#1{%
7182   \begingroup\expandafter\expandafter\expandafter\endgroup
7183   \expandafter\ifx\csname c@#1\endcsname\relax
7184     \expandafter\@gobble
7185   \else
7186     \begingroup\expandafter\expandafter\expandafter\endgroup
7187     \expandafter\ifx\csname the#1\endcsname\relax
7188       \expandafter\expandafter\expandafter\@gobble
7189     \else
7190       \expandafter\expandafter\expandafter\@firstofone
7191     \fi
7192   \fi
7193 }
7194 \Hy@CounterExists{section}{%
7195   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7196 }
7197 \Hy@CounterExists{part}{%
7198   \providecommand\theHpart{\arabic{part}}}%
7199 }
7200 \ltx@ifundefined{thechapter}{%
7201   \providecommand\theHsection   {\arabic{section}}}%
7202   \providecommand\theHfigure    {\arabic{figure}}}%
7203   \providecommand\theHtable     {\arabic{table}}}%
7204 }{%
7205   \providecommand\theHchapter   {\arabic{chapter}}}%
7206   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
7207   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
7208   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
7209 }
7210 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7211 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7212 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
7213 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7214 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
7215 \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.

```

7216 \let\H@item\item
7217 \newcounter{Item}
7218 \def\theHItem{\arabic{Item}}

```

```

7219 \def\item{%
7220   \@hyper@itemfalse
7221   \if@nmbrlist\@hyper@itemtrue\fi
7222   \H@item
7223 }

7224 \providecommand\theHenumi   {\theHItem}
7225 \providecommand\theHenumii  {\theHItem}
7226 \providecommand\theHenumiii {\theHItem}
7227 \providecommand\theHenumiv  {\theHItem}
7228 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7229 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7230 \@ifundefined{theHHmpfootnote}{%
7231   \let\theHHmpfootnote\theHHfootnote
7232 }{}

```

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.

```

7233 \let\H@refstepcounter\refstepcounter
7234 \edef\name@of@eq{equation}%
7235 \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.

```

7236 \newif\if@hyper@item
7237 \newif\if@skiphyperref
7238 \@hyper@itemfalse
7239 \@skiphyperreffalse
7240 \def\refstepcounter#1{%
7241   \ifHy@pdfstring
7242   \else
7243     \H@refstepcounter{#1}%
7244     \edef\This@name{#1}%
7245     \ifx\This@name\name@of@slide
7246     \else
7247       \if@skiphyperref
7248       \else
7249         \if@hyper@item
7250           \stepcounter{Item}%
7251           \hyper@refstepcounter{Item}%
7252           \@hyper@itemfalse
7253         \else
7254           \hyper@refstepcounter{#1}%
7255         \fi
7256       \fi
7257     \fi
7258   \fi
7259 }
7260 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS^ITeX 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.

```

7261 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7262 \def\hyper@refstepcounter#1{%
7263   \edef\This@name{#1}%
7264   \ifx\This@name\name@of@eq
7265     \@ifundefined{theHequation}{%
7266       \make@stripped@name{\theequation}%
7267       \let\theHequation\newname
7268     }{}%
7269   \fi
7270   \HyCnt@ProvideTheHCounter{#1}%
7271   \hyper@makecurrent{#1}%
7272   \ifmeasuring@
7273   \else
7274     \Hy@raisedlink{%
7275       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7276     }%
7277   \fi
7278 }

```

`\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.

```

7279 \def\HyCnt@ProvideTheHCounter#1{%
7280   \@ifundefined{theH#1}{%
7281     \expandafter\def\csname theH#1\endcsname{}%
7282     \def\Hy@temp{\@elt{#1}}%
7283     \ltx@onelevel@sanitize\Hy@temp
7284     \let\HyOrg@elt\@elt
7285     \edef\@elt{%
7286       \noexpand\HyCnt@LookForParentCounter
7287       \expandafter\noexpand\csname theH#1\endcsname
7288     }%
7289     \cl@&ckpt
7290     \let\@elt\HyOrg@elt
7291     \expandafter
7292     \ltx@LocalAppendToMacro\csname theH#1\endcsname
7293     \expandafter{%
7294       \expandafter\@arabic\csname c@#1\endcsname
7295     }%
7296   }{}%
7297 }

```

`\Hy@LookForParentCounter`

```

7298 \def\HyCnt@LookForParentCounter#1#2{%
7299   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7300   \ltx@ifundefined{cl@#2}{%
7301   }{%
7302     \ltx@onelevel@sanitize\Hy@temp@A
7303     \edef\Hy@temp@A{%
7304       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7305     }\Hy@temp@A
7306     \ifin@
7307     \ltx@ifundefined{theH#2}{%
7308       \expandafter\ltx@LocalAppendToMacro\expandafter#1%

```

```

7309     \expandafter{%
7310     \expandafter\@arabic\csname c@#2\endcsname.%
7311     }%
7312 }{%
7313     \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7314     \expandafter{%
7315     \csname theH#2\endcsname.%
7316     }%
7317 }%
7318 \fi
7319 }%
7320 }

```

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`.

```

7321 \begingroup\expandafter\expandafter\expandafter\endgroup
7322 \expandafter\ifx\csname chapter\endcsname\relax
7323 \def\Hy@chapterstring{section}%
7324 \else
7325 \def\Hy@chapterstring{chapter}%
7326 \fi
7327 \def\Hy@appendixstring{appendix}
7328 \def\Hy@chapapp{\Hy@chapterstring}
7329 \ltx@ifundefined{appendix}{%
7330 }{%
7331 \let\HyOrg@appendix\appendix
7332 \def\Hy@AlphNoErr#1{%
7333 \ifnum\value{#1}>26 %
7334 Alph\number\value{#1}%
7335 \else
7336 \ifnum\value{#1}<1 %
7337 Alph\number\value{#1}%
7338 \else
7339 \Alph{#1}%
7340 \fi
7341 \fi
7342 }%
7343 \def\appendix{%
7344 \ltx@ifundefined{chapter}{%
7345 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7346 }{%
7347 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7348 }%
7349 \xdef\Hy@chapapp{\Hy@appendixstring}%
7350 \HyOrg@appendix
7351 }%
7352 }

```

`\Hy@Test@alph`

```

7353 \def\Hy@Test@alph#1{%
7354 \ifcase#1\or
7355 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7356 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or

```



```

7357   u\or v\or w\or x\or y\or z%
7358   \else
7359   \@ctrerr
7360   \fi
7361 }

```

\Hy@Test@Alph

```

7362 \def\Hy@Test@Alph#1{%
7363   \ifcase#1\or
7364   A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7365   K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7366   U\or V\or W\or X\or Y\or Z%
7367   \else
7368   \@ctrerr
7369   \fi
7370 }

```

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

```

7371 \def\hyper@makecurrent#1{%
7372   \begingroup
7373   \Hy@safe@activetrue
7374   \edef\Hy@param{#1}%
7375   \ifx\Hy@param\Hy@chapterstring
7376   \let\Hy@param\Hy@chapapp
7377   \fi
7378   \ifHy@hypertextnames
7379   \let\@number\@firstofone
7380   \def\@fnsymbol##1{\fnsymbol\number##1}%
7381   \def\@arabic##1{\number##1}%
7382   \ifx\@alph\Hy@Test@alph
7383   \else
7384   \def\@alph{alph\number}%
7385   \fi
7386   \ifx\@Alph\Hy@Test@Alph
7387   \else
7388   \def\@Alph{Alph\number}%
7389   \fi
7390   \ifHy@naturalnames
7391   \let\textlatin\@firstofone
7392   \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7393   \else
7394   \xdef\HyperGlobalCurrentHref{%
7395     \csname
7396     the%
7397     \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7398     #1%
7399     \endcsname
7400   }%
7401   \fi
7402   \xdef\HyperGlobalCurrentHref{%
7403     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7404   }%
7405   \else
7406   \Hy@GlobalStepCount\Hy@linkcounter
7407   \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7408   \fi

```

```

7409 \endgroup
7410 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7411 \ifHy@localanchorname
7412   \let\@currentHref\HyperLocalCurrentHref
7413 \else
7414   \global\let\@currentHref\HyperGlobalCurrentHref
7415 \fi
7416 }

\Hy@MakeCurrentHref

7417 \def\Hy@MakeCurrentHref#1{%
7418   \edef\HyperLocalCurrentHref{#1}%
7419   \@onelevel@sanitize\HyperLocalCurrentHref
7420   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7421   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7422   \ifHy@localanchorname
7423     \let\@currentHref\HyperLocalCurrentHref
7424   \else
7425     \global\let\@currentHref\HyperGlobalCurrentHref
7426   \fi
7427 }

```

\Hy@MakeCurrentHrefAuto

```

7428 \def\Hy@MakeCurrentHrefAuto#1{%
7429   \Hy@GlobalStepCount\Hy@linkcounter
7430   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7431 }

```

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

```

7432 \def\@currentHlabel{\@currentHref}

7433 \@ifpackageloaded{fancyvrb}{%
7434   \@ifpackagelater{fancyvrb}{1998/05/20}{%
7435     \def\FV@StepLineNo{%
7436       \FV@SetLineNo
7437       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7438       \FV@StepLineNo
7439     }%
7440   }%
7441 }{}

```

30 Package lastpage support

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

\lastpage@putlabel

```

7442 \Hy@AtBeginDocument{%
7443   \@ifclassloaded{revtex4}{%
7444     \@namedef{ver@lastpage.sty}{1994/06/25}%
7445   }{}%

```

```

7446 \@ifpackageloaded{lastpage}{%
7447   \ifHy@pageanchor
7448   \else
7449     \Hy@WarningNoLine{%
7450       The \string\pageref{LastPage} link doesn't work\MessageBreak
7451       with disabled option `pageanchor'%
7452     }%
7453   \fi
7454   \def\lastpage@putlabel{%
7455     \addtocounter{page}{-1}%
7456     \if@filesw
7457       \begingroup
7458         \let\@number\@firstofone
7459         \ifHy@pageanchor
7460           \ifHy@hypertextnames
7461             \ifHy@plainpages
7462               \def\Hy@temp{\arabic{page}}%
7463             \else
7464               \Hy@unicodedefalse
7465               \pdfstringdef\Hy@temp{\thepage}%
7466             \fi
7467           \else
7468             \def\Hy@temp{\the\Hy@pagecounter}%
7469           \fi
7470         \fi
7471         \immediate\write\@auxout{%
7472           \string\newlabel
7473           {LastPage}{}{\thepage}{}{%
7474             \ifHy@pageanchor page.\Hy@temp\fi}{}%
7475           }%
7476         \endgroup
7477       \fi
7478       \addtocounter{page}{1}%
7479     }%
7480   \@ifclassloaded{revtex4}{%
7481     \begingroup
7482     \toks@{\expandafter{\lastpage@putlabel}%
7483     \edef\x{\endgroup
7484       \def\noexpand\lastpage@putlabel{%
7485         \noexpand\stepcounter{page}%
7486         \the\toks@
7487         \noexpand\addtocounter{page}\noexpand\m@ne
7488       }%
7489     }%
7490     \x
7491   }{}%
7492 }{}%
7493 }
7494 \end{package}
7495 \checkpackage{lastpage}[1994/06/25]
7496 \checkcommand\def\lastpage@putlabel{%
7497   \addtocounter{page}{-1}%
7498   \immediate\write\@auxout{%
7499     \string\newlabel{LastPage}{}{\thepage}{}%
7500   }%
7501 }%
7502 \addtocounter{page}{1}%

```

```

7503 }
7504 </check>
7505 <*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.

```

7506 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7507 \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:

```

7508 \@ifpackageloaded{titlesec}{%
7509   \def\ttl@Hy@steplink#1{%
7510     \Hy@MakeCurrentHrefAuto{#1*}%
7511     \edef\ttl@Hy@saveanchor{%
7512       \noexpand\Hy@raisedlink{%
7513         \noexpand\hyper@anchorstart{\@currentHref}%
7514         \noexpand\hyper@anchorend
7515         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7516         \noexpand\ttl@Hy@PatchSaveWrite
7517       }%
7518     }%
7519   }%
7520   \def\ttl@Hy@PatchSaveWrite{%
7521     \begingroup
7522     \toks@{\expandafter{\ttl@savewrite}}%
7523     \edef\x{\endgroup
7524       \def\noexpand\ttl@savewrite{%
7525         \let\noexpand\@currentHref
7526         \noexpand\ttl@Hy@SavedCurrentHref
7527         \the\toks@
7528       }%
7529     }%
7530     \x
7531   }%
7532   \def\ttl@Hy@refstepcounter#1{%
7533     \let\ttl@b\Hy@raisedlink
7534     \def\Hy@raisedlink##1{%
7535       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7536     }%
7537     \refstepcounter{#1}%
7538     \let\Hy@raisedlink\ttl@b
7539   }%
7540 }{}

```

Package titletoc support:

```

7541 \@ifpackageloaded{titletoc}{%
7542   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7543 }{}

```

33 Package varioref support

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

```

7544 \def\Hy@varioref@undefined{{??}{??}{-}{-}{-}}
7545 \@ifpackageloaded{varioref}{%
7546   \def\vref@pagenum#1#2{%
7547     \@ifundefined{r@#2}{%
7548       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7549     }{}%
7550     \edef#1{\getpagerefnumber{#2}}%
7551   }%
7552 }{}

```

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

```

7553 \def\Hy@varioref@refstepcounter#1{%
7554   \stepcounter{#1}%
7555   \protected@edef\@currentlabel{%
7556     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7557   }%
7558 }
7559 \AtBeginDocument{%
7560   \ifx\refstepcounter\Hy@varioref@refstepcounter
7561     \let\H@refstepcounter\refstepcounter
7562     \let\refstepcounter\Hy@saved@refstepcounter
7563   \fi
7564 }

```

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

```

7565 \@ifpackageloaded{longtable}{%
7566   \begingroup
7567   \def\y{\LT@array}%
7568   \@ifundefined{scr@LT@array}{%
7569     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7570   }{\def\y{\scr@LT@array}}%
7571   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7572     \expandafter\endgroup
7573     \expandafter\def\y[##1]##2{%
7574       \H@refstepcounter{#1}%
7575       \hyper@makecurrent{table}%
7576       \let\Hy@LT@currentHref\@currentHref
7577       #2\@sharp###4%
7578     }%
7579   }%
7580   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7581 \begingroup
7582 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%

```

```

7583 \endgroup
7584 \def\LT@start{%
7585   #1%
7586   \ifvoid\LT@foot#2\fi
7587   \let\@currentHref\Hy@LT@currentHref
7588   \Hy@raisedlink{%
7589     \hyper@anchorstart{\@currentHref}\hyper@anchorend
7590   }%
7591   #3%
7592 }%
7593 }%
7594 \expandafter\x\LT@start\@nil
7595 }{}

```

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.

```

7596 \let\new@refstepcounter\refstepcounter
7597 \let\H@equation\equation
7598 \let\H@endequation\endequation
7599 \@ifpackageloaded{amsmath}{%
7600   \long\def\Hy@temp{%
7601     \incr@eqnum
7602     \mathdisplay@push
7603     \st@rredfalse \global\@eqnswtrue
7604     \mathdisplay{equation}%
7605   }%
7606   \ifx\Hy@temp\equation
7607     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7608       \csname iftrue\endcsname
7609   \else
7610     \long\def\equation{%
7611       \mathdisplay@push
7612       \st@rredfalse \global\@eqnswtrue
7613       \mathdisplay{equation}%
7614       \incr@eqnum
7615     }%
7616   \fi
7617 \fi
7618 }{}%
7619 \def\equation{%
7620   \let\refstepcounter\H@refstepcounter
7621   \H@equation
7622   \@ifundefined{theHequation}{%
7623     \make@stripped@name{\theequation}%
7624     \let\theHequation\newname
7625   }{}%
7626   \hyper@makecurrent{equation}%

```

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

```

7627   \mathopen{%
7628     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%

```

```

7629 }%
7630 \let\refstepcounter\new@refstepcounter
7631 }%
7632 \def\endequation{%
7633 \ifx\Hy@raisedlink\ltx@empty
7634 \hyper@anchorend
7635 \else
7636 \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7637 \fi
7638 \H@endequation
7639 }%
7640 }

```

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.

```

7641 \newif\if@eqnstar
7642 \@eqnstarfalse
7643 \let\H@eqnarray\eqnarray
7644 \let\H@endeqnarray\endeqnarray
7645 \def\eqnarray{%
7646 \let\Hy@reserved@a\relax
7647 \def\@currentHref{}%
7648 \H@eqnarray
7649 \if@eqnstar
7650 \else
7651 \ifx\@currentHref\%
7652 \else
7653 \@ifundefined{theHequation}{%
7654 \make@stripped@name{\theequation}%
7655 \let\theHequation\newname
7656 }{}%
7657 \hyper@makecurrent{equation}%
7658 \mathopen{%
7659 \Hy@raisedlink{%
7660 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7661 }%
7662 }%
7663 \fi
7664 \fi
7665 }
7666 \def\endeqnarray{%
7667 \H@endeqnarray
7668 }

```

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.

```

7669 \@namedef{eqnarray*}{%
7670 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7671 }
7672 \@namedef{endeqnarray*}{%
7673 \nonumber\endeqnarray\@eqnstarfalse
7674 }

```

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

this:

```

7675 \ltx@ifundefined{subeqnarray}{-}{%
7676 \let\H@subeqnarray\subeqnarray
7677 \let\H@endsubeqnarray\endsubeqnarray
7678 \def\subeqnarray{%
7679 \let\Hy@reserved@a\relax
7680 \H@subeqnarray
7681 \@ifundefined{theHequation}{%
7682 \make@stripped@name{\theequation}%
7683 \let\theHequation\newname
7684 }{}%
7685 \hyper@makecurrent{equation}%
7686 \hyper@anchorstart{\@currentHref}{-}\hyper@anchorend
7687 }%
7688 \def\endsubeqnarray{%
7689 \H@endsubeqnarray
7690 }%
7691 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7692 }

```

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

```

7693 \def\make@stripped@name#1{%
7694 \begingroup
7695 \escapechar\m@ne
7696 \global\let\newname\@empty
7697 \protected@edef\Hy@tempa{#1}%
7698 \edef\@tempb{%
7699 \noexpand\@tfor\noexpand\Hy@tempa:=%
7700 \expandafter\strip@prefix\meaning\Hy@tempa
7701 }%
7702 \@tempb\do{%
7703 \if\Hy@tempa\else
7704 \if\Hy@tempa\else
7705 \xdef\newname{\newname\Hy@tempa}%
7706 \fi
7707 \fi
7708 }%
7709 \endgroup
7710 }

```

Support for amsmath's subequations:

```

7711 \begingroup\expandafter\expandafter\expandafter\endgroup
7712 \expandafter\ifx\csname subequations\endcsname\relax
7713 \else
7714 \let\HyOrg@subequations\subequations
7715 \def\subequations{%
7716 \stepcounter{equation}%
7717 \protected@edef\theHparentequation{%
7718 \@ifundefined{theHequation}\theequation\theHequation
7719 }%
7720 \addtocounter{equation}{-1}%
7721 \HyOrg@subequations
7722 \def\theHequation{\theHparentequation\alph{equation}}%
7723 \ignorespaces
7724 }%
7725 \fi

```


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

```

7726 \Hy@AtBeginDocument{%
7727 \@ifpackageloaded{cleveref}{%
7728 \let\Hy@savethm\@thm
7729 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7730 }{%
7731 \@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

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

```

```

7777 \def\@tempa{%
7778 \@oparg{\@begintheorem{#3}{}}{}%
7779 }%
7780 \else
7781 \H@refstepcounter{#2}%
7782 \hyper@makecurrent{#2}%
7783 \let\Hy@dth@currentHref\@currentHref
7784 \def\@tempa{%
7785 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7786 }%
7787 \fi
7788 \@tempa
7789 }%
7790 \else
7791 \def\@thm#1#2#3{%
7792 \ifhmode
7793 \unskip\unskip\par
7794 \fi
7795 \normalfont
7796 \trivlist
7797 \let\thmheadnl\relax
7798 \let\thm@swap\@gobble
7799 \thm@notefont{\fontseries\mddefault\upshape}%
7800 \thm@headpunct{.}% add period after heading
7801 \thm@headsep 5\p@ 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\dth@counter{#2}%
7807 \ifx\@empty\dth@counter
7808 \def\@tempa{%
7809 \@oparg{\@begintheorem{#3}{}}{}%
7810 }%
7811 \else
7812 \H@refstepcounter{#2}%
7813 \hyper@makecurrent{#2}%
7814 \let\Hy@dth@currentHref\@currentHref
7815 \def\@tempa{%
7816 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7817 }%
7818 \fi
7819 \@tempa
7820 }%
7821 \fi
7822 \dth@everypar={%
7823 \@minipagefalse
7824 \global\@newlistfalse
7825 \@noparitemfalse
7826 \if@inlabel
7827 \global\@inlabelfalse
7828 \begingroup
7829 \setbox\z@\lastbox
7830 \ifvoid\z@
7831 \kern-\itemindent
7832 \fi
7833 \endgroup

```

```

7834 \ifx\@empty\dth@counter
7835 \else
7836 \Hy@raisedlink{%
7837 \hyper@anchorstart{%
7838 \ltx@ifundefined{Hy@dth@currentHref}%
7839 \@currentHref\Hy@dth@currentHref
7840 }\hyper@anchorend
7841 }%
7842 \fi
7843 \unhbox\@labels
7844 \fi
7845 \if@nobreak
7846 \@nobreakfalse \clubpenalty\@M
7847 \else
7848 \clubpenalty\@clubpenalty \everypar{}%
7849 \fi
7850 }%
7851 }%

```

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

```

7852 {%
7853 \let\Hy@savethm\@thm
7854 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7855 }%
7856 }%
7857 }

```

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.

```

7858 \ifHy@hyperfootnotes
7859 \newcounter{Hfootnote}%
7860 \let\H@@footnotetext\@footnotetext
7861 \let\H@@footnotemark\@footnotemark
7862 \def\@xfootnotenext[#1]{%
7863 \begingroup
7864 \csname c@\@mpfn\endcsname #1\relax
7865 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7866 \endgroup
7867 \ifx\@footnotetext\@mpfootnotetext
7868 \expandafter\H@@mpfootnotetext
7869 \else
7870 \expandafter\H@@footnotetext
7871 \fi
7872 }%
7873 \def\@xfootnotemark[#1]{%
7874 \begingroup
7875 \c@footnote #1\relax
7876 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7877 \endgroup
7878 \H@@footnotemark
7879 }%

```

```

7880 \let\H@@mpfootnotetext\@mpfootnotetext
7881 \long\def\@mpfootnotetext#1{%
7882   \H@@mpfootnotetext{%
7883     \ifHy@nesting
7884       \expandafter\ltx@firstoftwo
7885     \else
7886       \expandafter\ltx@secondoftwo
7887     \fi
7888   {%
7889     \expandafter\hyper@@anchor\expandafter{%
7890       \Hy@footnote@currentHref
7891     }{#1}%
7892   }{%
7893     \Hy@raisedlink{%
7894       \expandafter\hyper@@anchor\expandafter{%
7895         \Hy@footnote@currentHref
7896       }{\relax}%
7897     }#1%
7898   }%
7899 }%
7900 }%
7901 \long\def\@footnotetext#1{%
7902   \H@@footnotetext{%
7903     \ifHy@nesting
7904       \expandafter\ltx@firstoftwo
7905     \else
7906       \expandafter\ltx@secondoftwo
7907     \fi
7908   {%
7909     \expandafter\hyper@@anchor\expandafter{%
7910       \Hy@footnote@currentHref
7911     }{#1}%
7912   }{%
7913     \Hy@raisedlink{%
7914       \expandafter\hyper@@anchor\expandafter{%
7915         \Hy@footnote@currentHref
7916       }{\relax}%
7917     }%
7918     \let\@currentHref\Hy@footnote@currentHref
7919     \let\@currentlabelname\@empty
7920     #1%
7921   }%
7922 }%
7923 }%

```

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.

```

7924 \def\@footnotemark{%
7925   \leavevmode
7926   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7927   \stepcounter{Hfootnote}%
7928   \global\let\Hy@saved@currentHref\@currentHref
7929   \hyper@makecurrent{Hfootnote}%
7930   \global\let\Hy@footnote@currentHref\@currentHref

```

```

7931 \global\let\@currentHref\Hy@saved@currentHref
7932 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7933 \@makefnmark
7934 \hyper@linkend
7935 \ifhmode\spacefactor\@x@sf\fi
7936 \relax
7937 }%

```

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

```

7938 \@ifpackageloaded{tabularx}{%
7939 \let\HyOrg@TX@endtabularx\TX@endtabularx
7940 \def\Hy@tabularx@hook{%
7941 \let\@footnotetext\H@@footnotetext
7942 \let\@footnotemark\H@@footnotemark
7943 \let\@mpfootnotetext\H@@mpfootnotetext
7944 }%
7945 \begingroup
7946 \toks@\expandafter{\TX@endtabularx}%
7947 \xdef\Hy@gtemp{%
7948 \noexpand\Hy@tabularx@hook
7949 \the\toks@
7950 }%
7951 \endgroup
7952 \let\TX@endtabularx\Hy@gtemp
7953 }{}%

```

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

```

7954 \@ifpackageloaded{longtable}{%
7955 \CheckCommand*{\LT@p@ftntext}[1]{%
7956 \edef\@tempa{%
7957 \the\LT@p@ftn
7958 \noexpand\footnotetext[\the\c@footnote]%
7959 }%
7960 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7961 }%
7962 \long\def\LT@p@ftntext#1{%
7963 \edef\@tempa{%
7964 \the\LT@p@ftn
7965 \begingroup
7966 \noexpand\c@footnote=\the\c@footnote\relax
7967 \noexpand\protected@xdef\noexpand\@thefnmark{%
7968 \noexpand\thempfn
7969 }%
7970 \noexpand\Hy@LT@footnotetext{%
7971 \Hy@footnote@currentHref
7972 }%
7973 }%
7974 \global\LT@p@ftn\expandafter{%
7975 \@tempa{#1}%
7976 \endgroup
7977 }%
7978 }%
7979 \long\def\Hy@LT@footnotetext#1#2{%
7980 \H@@@footnotetext{%

```

```

7981 \ifHy@nesting
7982 \hyper@@anchor{#1}{#2}%
7983 \else
7984 \Hy@raisedlink{%
7985 \hyper@@anchor{#1}{\relax}%
7986 }%
7987 \def\@currentHref{#1}%
7988 \let\@currentlabelname\@empty
7989 #2%
7990 \fi
7991 }%
7992 }%
7993 }{}%

```

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

```

7994 \@ifpackageloaded{fancyvrb}{%
7995 \def\V@@footnotetext{%
7996 \insert\footins\bgroup
7997 \csize reset@font\endcsname
7998 \footnotesize
7999 \interlinepenalty\interfootnotelinepenalty
8000 \splittopskip\footnotesep
8001 \splitmaxdepth\dp\strutbox
8002 \floatingpenalty \@MM
8003 \hsize\columnwidth
8004 \@parboxrestore
8005 \edef\@currentlabel{\csize p@footnote\endcsname\@thefnmark}%
8006 \@makefnmark}%
8007 \rule{\z@}{\footnotesep}%
8008 \bgroup
8009 \aftergroup\V@@@footnotetext
8010 \Hy@raisedlink{%
8011 \expandafter\hyper@@anchor\expandafter{%
8012 \Hy@footnote@currentHref
8013 }{\relax}%
8014 }%
8015 \let\@currentHref\Hy@footnote@currentHref
8016 \let\@currentlabelname\@empty
8017 \ignorespaces
8018 }%
8019 }{}%

```

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

```

8020 \def\Hy@temp#1{%
8021 \begingroup
8022 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8023 \endgroup
8024 \@footnotemark
8025 }%
8026 \ifx\Hy@temp\footref
8027 \def\footref#1{%
8028 \begingroup
8029 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8030 \endgroup
8031 \H@@@footnotemark
8032 }%
8033 \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.

```

8034 \let\HyOrg@maketitle\maketitle
8035 \def\maketitle{%
8036   \let\Hy@saved@footnotemark\@footnotemark
8037   \let\Hy@saved@footnotetext\@footnotetext
8038   \let\@footnotemark\H@@footnotemark
8039   \let\@footnotetext\H@@footnotetext
8040   \@ifnextchar[\Hy@maketitle@optarg{% ]
8041     \HyOrg@maketitle
8042     \Hy@maketitle@end
8043   }%
8044 }%
8045 \def\Hy@maketitle@optarg[#1]{%
8046   \HyOrg@maketitle[{#1}]%
8047   \Hy@maketitle@end
8048 }%
8049 \def\Hy@maketitle@end{%
8050   \ifx\@footnotemark\H@@footnotemark
8051     \let\@footnotemark\Hy@saved@footnotemark
8052   \fi
8053   \ifx\@footnotetext\H@@footnotetext
8054     \let\@footnotetext\Hy@saved@footnotetext
8055   \fi
8056 }%
```

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

```

8057 \def\realfootnote{%
8058   \@ifnextchar[\@xfootnote{%
8059     \stepcounter{\@mpfn}%
8060     \protected@xdef\@thefnmark{\thempfn}%
8061     \H@@@footnotemark\H@@@footnotetext
8062   }%
8063 }%

8064 \fi
8065 \Hy@DisableOption{hyperfootnotes}

8066 </package>
8067 <*check>
8068 \checklatex
8069 \checkcommand\def\@xfootnotenext[#1]{%
8070   \begingroup
8071     \csname c@\@mpfn\endcsname #1\relax
8072     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8073   \endgroup
8074   \@footnotetext
8075 }
8076 \checkcommand\def\@xfootnotemark[#1]{%
8077   \begingroup
8078     \c@footnote #1\relax
8079     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8080   \endgroup
8081   \@footnotemark
8082 }
8083 \checkcommand\def\@footnotemark{%
8084   \leavevmode
```

```

8085 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8086 \@makefnmark
8087 \ifhmode\spacefactor\@x@sf\fi
8088 \relax
8089 }
8090 </check>
8091 <*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.

```

8092 \def\caption{%
8093   \ifx\@captive\@undefined
8094     \@latex@error{\noexpand\caption outside float}\@ehd
8095     \expandafter\@gobble
8096   \else
8097     \H@refstepcounter\@captive
8098     \let\Hy@tempa\@caption
8099     \@ifundefined{float@caption}{%
8100       }{%
8101         \expandafter\ifx\csname @float@c@\@captive\endcsname
8102           \float@caption
8103         \let\Hy@tempa\Hy@float@caption
8104         \fi
8105       }%
8106     \expandafter\@firstofone
8107   \fi
8108   {\@dblarg{\Hy@tempa\@captive}}%
8109 }
8110 \long\def\@caption#1[#2]#3{%
8111   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8112     \csname iftrue\endcsname
8113     \global\let\@currentHref\hc@currentHref
8114   \else
8115     \hyper@makecurrent{\@captive}%
8116   \fi
8117   \@ifundefined{NR@gettitle}{%
8118     \def\@currentlabelname{#2}%
8119   }{%
8120     \NR@gettitle{#2}%
8121   }%
8122   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8123     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8124   }%
8125   \begingroup
8126     \@parboxrestore
8127     \if@minipage
8128       \setminipage
8129     \fi
8130     \normalsize
8131     \expandafter\ifx\csname if@capstart\expandafter\endcsname
8132       \csname iftrue\endcsname
8133       \global\@capstartfalse
8134       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8135     \else

```



```

8136 \makecaption{\csname fnum@#1\endcsname}{%
8137 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8138 \ifHy@nesting
8139 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8140 \else
8141 \Hy@raisedlink{%
8142 \expandafter\hyper@@anchor\expandafter{%
8143 \@currentHref
8144 }\relax}%
8145 }%
8146 #3%
8147 \fi
8148 }%
8149 \fi
8150 \par
8151 \endgroup
8152 }

```

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’.

```

8153 \let\Hy@float@caption\@caption
8154 \newcommand{\HyNew@float@makebox}[1]{%
8155 \HyOrg@float@makebox{%
8156 #1\relax
8157 \ifx\Hy@float@currentHref\@undefined
8158 \else
8159 \expandafter\hyper@@anchor\expandafter{%
8160 \Hy@float@currentHref
8161 }\relax}%
8162 \global\let\Hy@float@currentHref\@undefined
8163 \fi
8164 }%
8165 }%
8166 \@ifpackageloaded{float}{%
8167 \def\Hy@float@caption{%
8168 \ifx\Hy@float@currentHref\@undefined
8169 \hyper@makecurrent{\@cuptype}%
8170 \global\let\Hy@float@currentHref\@currentHref
8171 \else
8172 \let\@currentHref\Hy@float@currentHref
8173 \fi
8174 \float@caption
8175 }%
8176 \let\HyOrg@float@makebox\float@makebox
8177 \let\float@makebox\HyNew@float@makebox
8178 }{}
8179 \</package>
8180 \*check>
8181 \checklatex[1999/06/01 - 2000/06/01]
8182 \checkcommand\def\caption{%
8183 \ifx\@cuptype\@undefined
8184 \@latex@error{\noexpand\caption outside float}\@ehd
8185 \expandafter\@gobble

```

```

8186 \else
8187   \refstepcounter\@capttype
8188   \expandafter\@firstofone
8189 \fi
8190 {\@dblarg{\@caption\@capttype}}%
8191 }
8192 \checkcommand\long\def\@caption#1[#2]#3{%
8193   \par
8194   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8195     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8196   }%
8197   \begingroup
8198     \@parboxrestore
8199     \if@minipage
8200       \@setminipage
8201     \fi
8202     \normalsize
8203     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8204   \endgroup
8205 }
8206 \</check>
8207 \<*/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.

```

8208 \def\hyper@natlinkstart#1{%
8209   \Hy@backout{#1}%
8210   \hyper@linkstart{cite}{cite.#1}%
8211   \def\hyper@nat@current{#1}%
8212 }
8213 \def\hyper@natlinkend{%
8214   \hyper@linkend
8215 }
8216 \def\hyper@natlinkbreak#1#2{%
8217   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8218 }
8219 \def\hyper@natanchorstart#1{%
8220   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8221 }
8222 \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.

```

8223 \ltx@ifundefined{NAT@parse}{%
8224   \providecommand*\@extra@binfo{}%
8225   \providecommand*\@extra@b@citeb{}%

```

```

8226 \def\bibcite#1#2{%
8227   \@newl@bel{b}{#1\@extra@binfo}{%
8228     \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
8229   }%
8230 }%
8231 \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.”.

```

8232 \let\Hy@bibcite\bibcite
8233 \begingroup
8234   \@ifundefined{bbl@cite@choice}{}{%
8235     \g@addto@macro\bbl@cite@choice{%
8236       \let\bibcite\Hy@bibcite
8237     }%
8238   }%
8239 \endgroup

```

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

```

8240 \providecommand*{\@BIBLABEL}{\@biblabel}%
8241 \def\@bibitem[#1]#2{%
8242   \@skiphyperreftrue
8243   \H@item[%
8244     \ifx\Hy@raisedlink\@empty
8245       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8246       \@BIBLABEL{#1}%
8247       \hyper@anchorend
8248     \else
8249       \Hy@raisedlink{%
8250         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8251       }%
8252       \@BIBLABEL{#1}%
8253     \fi
8254     \hfill
8255   ]%
8256   \@skiphyperreffalse
8257   \if@filesw
8258     \begingroup
8259     \let\protect\noexpand
8260     \immediate\write\@auxout{%
8261       \string\bibcite{#2}{#1}%
8262     }%
8263   \endgroup
8264   \fi
8265   \ignorespaces
8266 }%

```

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

```

8267 \def\@bibitem#1{%
8268   \@skiphyperreftrue\H@item\@skiphyperreffalse
8269   \Hy@raisedlink{%
8270     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8271   }%
8272   \if@filesw
8273     \begingroup
8274     \let\protect\noexpand
8275     \immediate\write\@auxout{%
8276       \string\bibcite{#1}{\the\value{\@listctr}}%

```

```

8277     }%
8278     \endgroup
8279     \fi
8280     \ignorespaces
8281 }%
8282 }{}

8283 </package>
8284 <*check>
8285 \checklatex
8286 \checkcommand\def\@lbibitem[#1]#2{%
8287   \item[\@biblabel{#1}\hfill]%
8288   \if@filesw
8289     {%
8290       \let\protect\noexpand
8291       \immediate\write\@auxout{%
8292         \string\bibcite{#2}{#1}%
8293       }%
8294     }%
8295   \fi
8296   \ignorespaces
8297 }
8298 \checkcommand\def\@bibitem#1{%
8299   \item
8300   \if@filesw
8301     \immediate\write\@auxout{%
8302       \string\bibcite{#1}{\the\value{\@listctr}}%
8303     }%
8304   \fi
8305   \ignorespaces
8306 }
8307 </check>
8308 <*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.

```

8309 \ifclassloaded{revtex}{%
8310   \Hy@Info{*** compatibility with revtex **** }%
8311   \def\revtex@checking#1#2{%
8312     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8313     \expandafter\def\csname b@#1\endcsname{#2}%
8314     \@SetMaxRnhefLabel{#1}%
8315     \expandafter\let\csname b@#1\endcsname\T@temp
8316   }%

```

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

```

8317 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
8318 \providecommand*{\@extra@b@citeb}{}%
8319 \def\CITEX[#1]#2{%
8320   \let\@citea\@empty
8321   \leavevmode
8322   \unskip
8323   $\{
8324   \scriptstyle
8325   \@CITE{
8326     \@for\@citeb:=#2\do{%

```

```

8327 \citea
8328 \def\citea{,\penalty\@m\ }%
8329 \edef\citeb{\expandafter\@firstofone\@citeb}%
8330 \if@filesw
8331 \immediate\write\@auxout{\string\citation{\@citeb}}%
8332 \fi
8333 \ifundefined{b@\@citeb\extra@b@citeb}{%
8334 \mbox{\reset@font\bfseries ?}%
8335 \G@refundefinedtrue
8336 \latex@warning{%
8337 Citation `'\@citeb' on page \thepage \space undefined%
8338 }%
8339 }{%
8340 {\csname b@\@citeb\@extra@b@citeb\endcsname}%
8341 }%
8342 }%
8343 }{#1}%
8344 }$%
8345 }%

```

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.

```

8346 \def\citex[#1]#2{%
8347 \let\citea\empty
8348 \cite{%
8349 \@for\citeb:=#2\do{%
8350 \citea
8351 \def\citea{,\penalty\@m\ }%
8352 \edef\citeb{\expandafter\@firstofone\@citeb}%
8353 \if@filesw
8354 \immediate\write\@auxout{\string\citation{\@citeb}}%
8355 \fi
8356 \ifundefined{b@\@citeb\@extra@b@citeb}{%
8357 \mbox{\reset@font\bfseries ?}%
8358 \G@refundefinedtrue
8359 \latex@warning{%
8360 Citation `'\@citeb' on page \thepage \space undefined%
8361 }%
8362 }{%
8363 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8364 }%
8365 }%
8366 }{#1}%
8367 }%
8368 }{}

```

38.1 Package harvard

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

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

```

8369 \ifpackageloaded{harvard}{%
8370 \Hy@AtBeginDocument{%

```

```

8371 \Hy@Info{*** compatibility with harvard *** }%
8372 \Hy@raiselinksfalse
8373 \def\harvardcite#1#2#3#4{%
8374   \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{}{cite.#1}{#2}}%
8375   \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{}{cite.#1}{#3}}%
8376   \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{}{cite.#1}{#4}}%
8377   \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8378 }%
8379 \def\HAR@citetoaux#1{%
8380   \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8381   \ifHy@backref
8382     \ifx\@empty\@currentlabel
8383       \else
8384         \@bsphack
8385         \if@filesw
8386           \protected@write\@auxout{}{%
8387             \string\@writefile{brf}{%
8388               \string\backcite{#1}{%
8389                 {\thepage}{\@currentlabel}{\@currentHref}%
8390               }%
8391             }%
8392           }%
8393         \fi
8394         \@esphack
8395       \fi
8396     \fi
8397   }%
8398   \def\harvarditem{%
8399     \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8400   }%
8401   \def\@harvarditem[#1]#2#3#4#5\par{%
8402     \item[]%
8403     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8404     \if@filesw
8405       \begingroup
8406       \def\protect##1{\string ##1\space}%
8407       \ifthenelse{\equal{#1}{\null}}{%
8408         {\def\next{{#4}{#2}{#2}{#3}}}%
8409         {\def\next{{#4}{#2}{#1}{#3}}}%
8410       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8411       \endgroup
8412     \fi
8413     \protect\hspace*{-\labelwidth}%
8414     \protect\hspace*{-\labelsep}%
8415     \ignorespaces
8416     #5%
8417     \ifHy@backref
8418       \newblock
8419       \backref{\csname br@#4\endcsname}%
8420     \fi
8421     \par
8422   }%

```

\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:

```

8423 \long\def\HAR@checkcitations#1#2#3#4{%

```

```

8424 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8425 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8426 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8427 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8428 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8429 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8430 \else
8431 \@tempswatrue
8432 \fi
8433 \else
8434 \@tempswatrue
8435 \fi
8436 \else
8437 \@tempswatrue
8438 \fi
8439 }%
8440 }%
8441 }{}

```

38.2 Package chicago

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

```

8442 \@ifpackageloaded{chicago}{%

\citeN
8443 \def\citeN{%
8444 \def\@citesep{~1000}%
8445 \def\@cite##1##2{##1}%
8446 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8447 \@citedata@opt
8448 }%

\shortciteN
8449 \def\shortciteN{%
8450 \def\@citesep{~1000}%
8451 \def\@cite##1##2{##1}%
8452 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8453 \@citedata@opt
8454 }%

\@citedata@opt
8455 \def\@citedata@opt{%
8456 \let\@cite@opt\@empty
8457 \@ifnextchar [{%
8458 \@tempswatrue
8459 \@citedatax@opt
8460 }{%
8461 \@tempswafalse
8462 \@citedatax[]%
8463 }%
8464 }%

\@citedatax@opt
8465 \def\@citedatax@opt[#1]{%
8466 \def\@cite@opt{, #1}%
8467 \@citedatax[{#1}]%
8468 }%

```

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.

```

8470 \ltx@ifclassloaded{slides}{%
8471   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8472   \def\Hy@PageAnchorSlidesPlain{%
8473     \advance\c@page\ltx@one
8474     \edef\Hy@TempPageAnchor{%
8475       \noexpand\hyper@@anchor{%
8476         page.\the\c@slide.\the\c@overlay.\the\c@note%
8477         \ifnum\c@page=\ltx@one
8478           \else
8479             .\the\c@page
8480           \fi
8481         }%
8482       }%
8483       \advance\c@page-\ltx@one
8484     }%
8485     \def\Hy@PageAnchorSlide{%
8486       \advance\c@page\ltx@one
8487       \ifnum\c@page>\ltx@one
8488         \ltx@ifundefined{theHpage}{%
8489           \protected@edef\Hy@TheSlideOptionalPage{%
8490             \Hy@SlidesFormatOptionalPage{thepage}%
8491           }%
8492         }{%
8493           \protected@edef\Hy@TheSlideOptionalPage{%
8494             \Hy@SlidesFormatOptionalPage{theHpage}%
8495           }%
8496         }%
8497       \else
8498         \def\Hy@TheSlideOptionalPage{}%
8499       \fi
8500       \advance\c@page-\ltx@one
8501       \pdfstringdef\@the@H@page{%
8502         \csname
8503           the%
8504           \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8505           \Hy@SlidesPage
8506         \endcsname
8507       \Hy@TheSlideOptionalPage
8508     }%
8509     \ltx@gobblethree
8510   }%
8511   \def\Hy@SlidesPage{slide}%
8512   \g@addto@macro\slide{%
8513     \def\Hy@SlidesPage{slide}%
8514   }%
8515   \g@addto@macro\overlay{%

```



```

8516 \def\Hy@SlidesPage{overlay}%
8517 }%
8518 \g@addto@macro\note{%
8519 \def\Hy@SlidesPage{note}%
8520 }%
8521 }{%
8522 \def\Hy@PageAnchorSlidesPlain{}%
8523 \def\Hy@PageAnchorSlide{}%
8524 }
8525 \def\Hy@EveryPageAnchor{%
8526 \Hy@DistillerDestFix
8527 \ifHy@pageanchor
8528 \ifHy@hypertextnames
8529 \ifHy@plainpages
8530 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8531 \Hy@PageAnchorSlidesPlain
8532 \else
8533 \begingroup
8534 \let\@number\@firstofone
8535 \Hy@unicodefalse
8536 \Hy@PageAnchorSlide
8537 \pdfstringdef\@the@H@page{\thepage}%
8538 \endgroup
8539 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8540 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8541 \fi
8542 \else
8543 \Hy@GlobalStepCount\Hy@pagecounter
8544 \def\Hy@TempPageAnchor{%
8545 \hyper@@anchor{page.\the\Hy@pagecounter}%
8546 }%
8547 \fi
8548 \vbox to 0pt{%
8549 \kern\voffset
8550 \kern\topmargin
8551 \kern-1bp\relax
8552 \hbox to 0pt{%
8553 \kern\hoffset
8554 \kern\ifodd\value{page}%
8555 \oddsidemargin
8556 \else
8557 \evensidemargin
8558 \fi
8559 \kern-1bp\relax
8560 \Hy@TempPageAnchor\relax
8561 \hss
8562 }%
8563 \vss
8564 }%
8565 \fi
8566 }
8567 \g@addto@macro\Hy@EveryPageBoxHook{%
8568 \Hy@EveryPageAnchor
8569 }

```

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.

```

8570 \def\addcontentsline#1#2#3{% toc extension, type, tag
8571   \begingroup
8572   \let\label\@gobble
8573   \ifx\@currentHref\@empty
8574     \Hy@Warning{%
8575       No destination for bookmark of \string\addcontentsline,%
8576       \MessageBreak destination is added%
8577     }%
8578   \phantomsection
8579   \fi
8580   \expandafter\ifx\csname toplevel@#2\endcsname\relax
8581     \begingroup
8582     \def\Hy@tempa{#1}%
8583     \ifx\Hy@tempa\Hy@bookmarkstype
8584       \Hy@WarningNoLine{%
8585         bookmark level for unknown #2 defaults to 0%
8586       }%
8587     \else
8588       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8589     \fi
8590   \endgroup
8591   \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8592   \fi
8593   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8594   \Hy@writebookmark{\csname the#2\endcsname}%
8595     {#3}%
8596     {\@currentHref}%
8597     {\Hy@toclevel}%
8598     {#1}%
8599   \ifHy@verbose
8600     \begingroup
8601     \def\Hy@tempa{#3}%
8602     \@onelevel@sanitize\Hy@tempa
8603     \let\temp@online\on@line
8604     \let\on@line\@empty
8605     \Hy@Info{%
8606       bookmark\temp@online:\MessageBreak
8607       thecounter {\csname the#2\endcsname}\MessageBreak
8608       text {\Hy@tempa}\MessageBreak
8609       reference {\@currentHref}\MessageBreak
8610       toplevel {\Hy@toclevel}\MessageBreak
8611       type {#1}%
8612     }%
8613   \endgroup
8614   \fi
8615   \addtocontents{#1}{%
8616     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8617   }%
8618 \endgroup
8619 }
```

`\contentsline` The page number might be empty. In this case the link for the page number is

suppressed to avoid little link boxes.

```

8620 \def\contentsline#1#2#3#4{%
8621   \begingroup
8622     \Hy@safe@activetrue
8623   \edef\x{\endgroup
8624     \def\noexpand\Hy@tocdestname{#4}%
8625   }\x
8626   \ifx\Hy@tocdestname\ltx@empty
8627     \csname l@#1\endcsname{#2}{#3}%
8628   \else
8629     \ifcase\Hy@linktoc % none
8630       \csname l@#1\endcsname{#2}{#3}%
8631     \or % section
8632       \csname l@#1\endcsname{%
8633         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8634       }{#3}%
8635     \or % page
8636       \def\Hy@temp{#3}%
8637       \ifx\Hy@temp\ltx@empty
8638         \csname l@#1\endcsname{#2}{#3}%
8639       \else
8640         \csname l@#1\endcsname{{#2}}{%
8641           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8642         }%
8643       \fi
8644     \else % all
8645       \def\Hy@temp{#3}%
8646       \ifx\Hy@temp\ltx@empty
8647         \csname l@#1\endcsname{%
8648           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8649         }{}%
8650       \else
8651         \csname l@#1\endcsname{%
8652           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8653         }{%
8654           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8655         }%
8656       \fi
8657     \fi
8658   \fi
8659 }

8660 \end{package}
8661 \end{*check}
8662 \checklatex
8663 \checkcommand\def\addcontentsline#1#2#3{%
8664   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8665 }
8666 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8667 \end{check}
8668 \end{*package}

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8669 \let\H@definecounter\@definecounter
8670 \def\@definecounter#1{%
8671   \H@definecounter{#1}%
8672   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8673 }

```

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.

```

8674 \let\H@newctr\@newctr
8675 \def\@newctr#1[#2]{%
8676   \H@newctr#1[{#2}]%
8677   \expandafter\gdef\csname theH#1\endcsname{%
8678     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8679   }%
8680 }

```

42 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```

8681 \@ifpackageloaded{amsmath}{%
8682   \def\Hy@make@anchor{%
8683     \Hy@MakeCurrentHrefAuto{AMS}%
8684     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8685   }%
8686   \def\Hy@make@df@tag@@#1{%
8687     \gdef\df@tag{%
8688       \maketag@@@{\Hy@make@anchor#1}%
8689       \def\@currentlabel{#1}%
8690     }%
8691   }%
8692   \def\Hy@make@df@tag@@@#1{%
8693     \gdef\df@tag{%
8694       \tagform@{\Hy@make@anchor#1}%
8695       \toks@{\@xp{p@equation{#1}}}%
8696       \edef\@currentlabel{\the\toks@}%
8697     }%
8698   }%
8699   \let\HyOrg@make@df@tag@@\make@df@tag@@
8700   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8701   \let\make@df@tag@@\Hy@make@df@tag@@
8702   \let\make@df@tag@@@\Hy@make@df@tag@@@
8703 }{}

```

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

```

8704 \@ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
8705   \let\H@seteqlabel\@seteqlabel
8706   \def\@seteqlabel#1{%
8707     \H@seteqlabel{#1}%
8708     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8709     \Hy@raisedlink{%

```

```

8710 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8711 }%
8712 }%
8713 }{}

```

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.

```

8714 \let\HyOrg@addtoreset\@addtoreset
8715 \def\@addtoreset#1#2{%
8716   \HyOrg@addtoreset{#1}{#2}%
8717   \expandafter\xdef\csname theH#1\endcsname{%
8718     \expandafter\noexpand
8719     \csname the\@ifundefined{theH#2}{H#2\endcsname
8720     .\noexpand\the\noexpand\value{#1}}%
8721   }%
8722 }

```

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

```

8723 \</package>
8724 \*check>
8725 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8726 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8727   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8728     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8729       \@addtoreset{#2}{#3}%
8730       \@xp\xdef\csname the#2\endcsname{%
8731         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8732       }%
8733     }%
8734   }%
8735 }%
8736 \</check>
8737 \*package>
8738 \@ifpackageloaded{amsmath}{%
8739   \@ifpackagelater{amsmath}{1999/12/14}{%
8740     \renewcommand*\numberwithin[3][\arabic]{%
8741       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8742         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8743           \HyOrg@addtoreset{#2}{#3}%
8744           \@xp\xdef\csname the#2\endcsname{%
8745             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8746           }%

```

```

8747 \xp\xdef\csname theH#2\endcsname{%
8748 \xp\@nx
8749 \csname the\@ifundefined{theH#3}{H#3\endcsname
8750 .\@nx#1{#2}%
8751 }%
8752 }%
8753 }%
8754 }%
8755 }{%
8756 \Hy@WarningNoLine{%
8757 \string\numberwithin\space of package `amsmath' %
8758 only fixed\MessageBreak
8759 for version 2000/06/06 v2.12 or newer%
8760 }%
8761 }%
8762 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8763 \ifHy@hyperfigures
8764 \let\Hy@Gin@setfile\Gin@setfile
8765 \def\Gin@setfile#1#2#3{%
8766 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8767 }%
8768 \fi
8769 \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.

```

8770 \ifHy@hyperindex
8771 \def\HyInd@ParenLeft{({}%
8772 \def\HyInd@ParenRight{)}}%
8773 \def\hyperindexformat#1#2{%
8774 \let\HyOrg@hyperpage\hyperpage
8775 \let\hyperpage\@firstofone
8776 #1{\HyOrg@hyperpage{#2}}%
8777 \let\hyperpage\HyOrg@hyperpage
8778 }%
8779 \Hy@nextfalse
8780 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8781 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8782 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8783 \begingroup
8784 \lccode`\|=\expandafter`\HyInd@EncapChar\relax

```

```

8785 \lccode`\/=`\\relax
8786 \lowercase{\endgroup
8787 \ifHy@next
8788 \let\HyInd@org@wrindex\@wrindex
8789 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8790 \def\HyInd@@wrindex#1#2|#3|#4\\{%
8791 \ifx\\#3\\%
8792 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8793 \else
8794 \HyInd@@@wrindex{#1}{#2}#3\\%
8795 \fi
8796 }%
8797 \def\HyInd@@@wrindex#1#2#3#4\\{%
8798 \def\Hy@temp@A{#3}%
8799 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8800 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8801 \relax
8802 \HyInd@org@wrindex{#1}{%
8803 #2|hyperindexformat{/#3#4}%
8804 }%
8805 \else
8806 \ifx\\#4\\%
8807 \ifx\Hy@temp@A\HyInd@ParenRight
8808 \HyInd@org@wrindex{#1}{#2|#3}%
8809 \else
8810 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8811 \fi
8812 \else
8813 \HyInd@org@wrindex{#1}{%
8814 #2|#3hyperindexformat{/#4}%
8815 }%
8816 \fi
8817 \fi
8818 }%
8819 \else
8820 \def\@wrindex#1{\@@wrindex#1|\\}%
8821 \def\@@wrindex#1|#2|#3\\{%
8822 \if@filesw
8823 \ifx\\#2\\%
8824 \protected@write\@indexfile{}{%
8825 \string\indexentry{#1|hyperpage}{\thepage}%
8826 }%
8827 \else
8828 \HyInd@@@wrindex{#1}#2\\%
8829 \fi
8830 \fi
8831 \endgroup
8832 \@esphack
8833 }%
8834 \def\HyInd@@@wrindex#1#2#3\\{%
8835 \def\Hy@temp@A{#2}%
8836 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8837 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8838 \relax
8839 \protected@write\@indexfile{}{%
8840 \string\indexentry{%
8841 #1|hyperindexformat{/#2#3}%

```

```

8842     }\thepage}%
8843 }%
8844 \else
8845 \ifx\#3\%
8846 \ifx\Hy@temp@A\HyInd@ParenRight
8847 \HyInd@DefKey{#1}%
8848 \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8849 \let\Hy@temp\ltx@empty
8850 }{%
8851 \expandafter\let\expandafter\Hy@temp
8852 \csname HyInd@(\HyInd@key)\endcsname
8853 }%
8854 \protected@write\@indexfile{}{%
8855 \string\indexentry{#1|#2\Hy@temp}\thepage}%
8856 }%
8857 \else
8858 \protected@write\@indexfile{}{%
8859 \string\indexentry{#1|#2hyperpage}\thepage}%
8860 }%
8861 \HyInd@DefKey{#1}%
8862 \expandafter
8863 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8864 hyperpage%
8865 }%
8866 \fi
8867 \else
8868 \protected@write\@indexfile{}{%
8869 \string\indexentry{%
8870 #1|#2hyperindexformat{/#3}%
8871 }\thepage}%
8872 }%
8873 \ifx\Hy@temp@A\HyInd@ParenLeft
8874 \HyInd@DefKey{#1}%
8875 \expandafter
8876 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8877 hyperindexformat{/#3}%
8878 }%
8879 \fi
8880 \fi
8881 \fi
8882 }%
8883 \def\HyInd@DefKey#1{%
8884 \begingroup
8885 \let\protect\@unexpandable@protect
8886 \edef\Hy@temp{#1}%
8887 \ltx@onelevel@sanitize\Hy@temp
8888 \global\let\HyInd@key\Hy@temp
8889 \endgroup
8890 }%
8891 \fi
8892 }%
8893 \fi
8894 \Hy@DisableOption{hyperindex}
8895 \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.


```
8896 \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.

```
8897 \def\hyperpage#1{%
8898   \HyInd@hyperpage#1\nohyperpage{}\@nil
8899 }
8900 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8901   \HyInd@@hyperpage{#1}%
8902   #2%
8903   \def\Hy@temp{#3}%
8904   \ifx\Hy@temp\@empty
8905   \else
8906     \ltx@ReturnAfterFi{%
8907       \HyInd@hyperpage#3\@nil
8908     }%
8909   \fi
8910 }
8911 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8912 \def\@hyperpage#1--#2--#3\{\%
8913   \ifx\#2\%
8914     \@commahyperpage{#1}%
8915   \else
8916     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8917   \fi
8918 }
8919 \def\@commahyperpage#1{\@commahyperpage#1, \}
8920 \def\@commahyperpage#1, #2,#3\{\%
8921   \ifx\#2\%
8922     \HyInd@pagelink{#1}%
8923   \else
8924     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8925   \fi
8926 }
```

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

```
8927 \def\HyInd@pagelink#1{%
8928   \begingroup
8929   \toks@={}%
8930   \HyInd@removespaces#1 \@nil
8931   \endgroup
8932 }
8933 \def\HyInd@removespaces#1 #2\@nil{%
8934   \toks@=\expandafter{\the\toks@#1}%
8935   \ifx\#2\%
8936     \edef\x{\the\toks@}%
8937     \ifx\x\@empty
8938     \else
8939       \hyperlink{page.\the\toks@}{\the\toks@}%
8940     \fi
8941   \else
8942     \ltx@ReturnAfterFi{%
8943       \HyInd@removespaces#2\@nil
8944     }%
8945   \fi
8946 }
```

45 Compatibility with foiltex

```
8947 \@ifclassloaded{foils}{%
8948   \providecommand*\ext@table{lot}%
8949   \providecommand*\ext@figure{lof}%
8950 }{}
```

46 Compatibility with seminar slide package

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

```
8951 \@ifclassloaded{seminar}{%
8952   \Hy@seminarslidestrue
8953   \providecommand\theHslide{\arabic{slide}}}%
8954 }{%
8955   \Hy@seminarslidesfalse
8956 }
8957 \@ifpackageloaded{slidesec}{%
8958   \providecommand\theHslidesection {\arabic{slidesection}}%
8959   \providecommand\theHslidesubsection{%
8960     \theHslidesection.\arabic{slidesubsection}}%
8961   }%
8962   \def\slide@heading[#1]#2{%
8963     \H@refstepcounter{slidesection}%
8964     \@addtoreset{slidesubsection}{slidesection}%
8965     \addtocontents{los}{%
8966       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8967       {\@SCTR}{\slideheading.\theslidesection}}%
8968     }%
8969   \def\Hy@tempa{#2}%
8970   \ifx\Hy@tempa\@empty
8971     \else
8972       {%
8973         \edef\@currentlabel{%
8974           \csname p@slidesection\endcsname\theslidesection
8975         }%
8976         \makeslideheading{#2}%
8977       }%
8978     \fi
8979   \gdef\theslideheading{#1}%
8980   \gdef\theslidesubheading{}%
8981   \ifHy@bookmarksnumbered
8982     \def\Hy@slidetitle{\theslidesection\space #1}%
8983   \else
8984     \def\Hy@slidetitle{#1}%
8985   \fi
8986   \ifHy@hypertextnames
8987     \ifHy@naturalnames
8988       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8989       \Hy@writebookmark
8990         {\theslidesection}%
8991         {\Hy@slidetitle}%
8992         {slideheading.\theslidesection}%
8993         {1}%
8994         {toc}%
8995     \else
8996       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%

```

```

8997     \Hy@writebookmark
8998         {\theslidesection}%
8999         {\Hy@slidetitle}%
9000         {slideheading.\theHslidesection}%
9001         {1}%
9002         {toc}%
9003     \fi
9004 \else
9005     \Hy@GlobalStepCount\Hy@linkcounter
9006     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9007     \Hy@writebookmark
9008         {\theslidesection}%
9009         {\Hy@slidetitle}%
9010         {slideheading.\the\Hy@linkcounter}%
9011         {1}%
9012         {toc}%
9013 \fi
9014 }%
9015 \def\slide@subheading[#1]#2{%
9016     \H@refstepcounter{slidesubsection}%
9017     \addtocontents{los}{%
9018         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9019         {\@SCTR}{slideheading.\theslidesubsection}%
9020     }%
9021     \def\Hy@tempa{#2}%
9022     \ifx\Hy@tempa\@empty
9023     \else
9024         {%
9025             \edef\@currentlabel{%
9026                 \csname p@slidesubsection\endcsname\theslidesubsection
9027             }%
9028             \makeslidesubheading{#2}%
9029         }%
9030     \fi
9031     \gdef\theslidesubheading{#1}%
9032     \ifHy@bookmarksnumbered
9033         \def\Hy@slidetitle{\theslidesubsection\space #1}%
9034     \else
9035         \def\Hy@slidetitle{#1}%
9036     \fi
9037     \ifHy@hypertextnames
9038         \ifHy@naturalnames
9039             \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9040             \Hy@writebookmark
9041                 {\theslidesubsection}%
9042                 {\Hy@slidetitle}%
9043                 {slideheading.\theslidesubsection}%
9044                 {2}%
9045                 {toc}%
9046         \else
9047             \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9048             \Hy@writebookmark
9049                 {\theslidesubsection}%
9050                 {\Hy@slidetitle}%
9051                 {slideheading.\theHslidesubsection}%
9052                 {2}%
9053                 {toc}%

```

```

9054 \fi
9055 \else
9056 \Hy@GlobalStepCount\Hy@linkcounter
9057 \hyper@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9058 \Hy@writebookmark
9059 {\theslidesubsection}%
9060 {\Hy@slidetitle}%
9061 {slideheading.\the\Hy@linkcounter}%
9062 {1}%
9063 {toc}%
9064 \fi
9065 }%
9066 \providecommand*{\listslidenam}{List of Slides}%
9067 \def\listofslides{%
9068 \section*{%
9069 \listslidenam
9070 \@mkboth{%
9071 \expandafter\MakeUppercase\listslidenam
9072 }{%
9073 \expandafter\MakeUppercase\listslidenam
9074 }%
9075 }%
9076 \def\l@slide##1##2##3##4{%
9077 \slide@undottedcline{%
9078 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9079 }{%
9080 }%
9081 \let\l@subslide\l@slide
9082 \@startlos
9083 }%
9084 \def\slide@contents{%
9085 \def\l@slide##1##2##3##4{%
9086 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9087 }%
9088 \let\l@subslide\@gobblefour
9089 \@startlos
9090 }%
9091 \def\Slide@contents{%
9092 \def\l@slide##1##2##3##4{%
9093 \ifcase\lslide@flag
9094 \message{##1 ** \the\c@slide@section}%
9095 \ifnum##1>\c@slide@section
9096 \def\lslide@flag{1}%
9097 {%
9098 \large
9099 \slide@ccline{%
9100 \slidenumberline{$\Rightarrow\bullet$}%
9101 {\hyperlink{##4}{##2}}%
9102 }{##3}%
9103 }%
9104 \else
9105 {%
9106 \large
9107 \slide@ccline{%
9108 \slidenumberline{$\surd\;\bullet$}%
9109 {\hyperlink{##4}{##2}}%
9110 }{##3}%

```

```

9111     }%
9112     \fi
9113   \or
9114     \def\lslide@flag{2}%
9115     {%
9116       \large
9117       \slide@cline{%
9118         \slidenumberline{$\bullet$}%
9119         {\hyperlink{###4}{##2}}}%
9120       }{##3}%
9121     }%
9122   \or
9123     {%
9124       \large
9125       \slide@cline{%
9126         \slidenumberline{$\bullet$}%
9127         {\hyperlink{###4}{##2}}}%
9128       }{##3}%
9129     }%
9130   \fi
9131 }%
9132 \def\l@subslide##1##2##3##4{%
9133   \ifnum\lslide@flag=1 %
9134     \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{###4}{##2}}{}%
9135   \fi
9136 }%
9137 \def\lslide@flag{0}%
9138 \@startlos
9139 }%
9140 }{}

```

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.)

```

9141 \ifHy@texht
9142   \expandafter\endinput
9143 \fi
9144 \let\real@setref\@setref
9145 \def\@setref#1#2#3{% csname, extract group, refname
9146   \ifx#1\relax
9147     \protect\G@refundefinedtrue
9148     \nfss@text{\reset@font\bfseries ??}%
9149     \@latex@warning{%
9150       Reference `#3' on page \thepage \space undefined%
9151     }%
9152   \else
9153     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9154   \fi
9155 }

```

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

```

9156 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9157   \begingroup
9158   \toks0={\hyper@@link{#5}{#4}}%
9159   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9160   \edef\x{\endgroup
9161     \the\toks0 {\the\toks1 }%

```

```

9162 }%
9163 \x
9164 }
9165 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9166 \ifx#1\relax
9167 \protect\G@refundefinedtrue
9168 \nfss@text{\reset@font\bfseries ??}%
9169 \@latex@warning{%
9170 Reference `#3' on page \thepage \space undefined%
9171 }%
9172 \else
9173 \protect\hyper@@@link
9174 {\expandafter\@fifthoffive#1}%
9175 {page.\expandafter\@secondoffive#1}%
9176 {\expandafter\@secondoffive#1}%
9177 \fi
9178 }

9179 </package>
9180 <*check>
9181 \checklatex
9182 \checkcommand\def\@setref#1#2#3{%
9183 \ifx#1\relax
9184 \protect\G@refundefinedtrue
9185 \nfss@text{\reset@font\bfseries ??}%
9186 \@latex@warning{%
9187 Reference `#3' on page \thepage \space undefined%
9188 }%
9189 \else
9190 \expandafter#2#1\null
9191 \fi
9192 }
9193 </check>
9194 <*package>

```

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

```

9195 \def\HyRef@StarSetRef#1{%
9196 \begingroup
9197 \Hy@safe@activetrue
9198 \edef\x{#1}%
9199 \@onelevel@sanitize\x
9200 \edef\x{\endgroup
9201 \noexpand\HyRef@@StarSetRef
9202 \expandafter\noexpand\csname r@\x\endcsname{\x}%
9203 }%
9204 \x
9205 }
9206 \def\HyRef@@StarSetRef#1#2#3{%
9207 \ifx#1\@undefined
9208 \let#1\relax
9209 \fi
9210 \real@setref#1#3{#2}%
9211 }
9212 \def\@refstar#1{%
9213 \HyRef@StarSetRef{#1}\@firstoffive
9214 }
9215 \def\@pagerefstar#1{%

```

```

9216 \HyRef@StarSetRef{#1}\@secondoffive
9217 }
9218 \def\@namerefstar#1{%
9219 \HyRef@StarSetRef{#1}\@thirdoffive
9220 }
9221 \Hy@AtBeginDocument{%
9222 \ifpackageloaded{varioref}{%
9223 \def\@Refstar#1{%
9224 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9225 }%
9226 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9227 \MakeUppercase#1%
9228 }%
9229 \DeclareRobustCommand*\Ref{#1}{%
9230 \ifstar\@Refstar\HyRef@Ref
9231 }%
9232 \def\HyRef@Ref#1{%
9233 \hyperref[{#1}]{\Ref*{#1}}%
9234 }%
9235 \def\Vr@f#1{%
9236 \leavevmode\unskip\vref@space
9237 \hyperref[{#1}]{%
9238 \Ref*{#1}%
9239 \let\vref@space\nobreakspace
9240 \@vpageref[\unskip]{#1}%
9241 }%
9242 }%
9243 \def\vr@f#1{%
9244 \leavevmode\unskip\vref@space
9245 \begingroup
9246 \let\T@pageref\@pagerefstar
9247 \hyperref[{#1}]{%
9248 \ref*{#1}%
9249 \vpageref[\unskip]{#1}%
9250 }%
9251 \endgroup
9252 }%
9253 }{}%
9254 }
9255 \DeclareRobustCommand*\autopageref{%
9256 \ifstar{%
9257 \HyRef@autopagerefname\pageref*%
9258 }\HyRef@autopageref
9259 }
9260 \def\HyRef@autopageref#1{%
9261 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9262 }
9263 \def\HyRef@autopagerefname{%
9264 \ltx@ifundefined{pageautorefname}{%
9265 \ltx@ifundefined{pagename}{%
9266 \Hy@Warning{No autoref name for `page'}%
9267 }{%
9268 \pagename\nobreakspace
9269 }%
9270 }{%
9271 \pageautorefname\nobreakspace
9272 }%

```

9273 }

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

```
9274 \DeclareRobustCommand*{\autoref}{%
9275   \leavevmode
9276   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9277 }
9278 \def\HyRef@autoref#1#2{%
9279   \begingroup
9280     \Hy@safe@activestrue
9281     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9282   \endgroup
9283 }
9284 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9285   \HyRef@ShowKeysRef{#2}%
9286   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9287   \edef\HyRef@thisref{%
9288     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9289   }%
9290   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9291   \Hy@safe@activesfalse
9292   #3{%
9293     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9294   }{%
9295     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9296   }{%
9297     \HyRef@currentHtag
9298     \expandafter\@firstoffive#1\@empty\@empty\@empty
9299     \null
9300   }%
9301   \else
9302     \protect\G@refundefinedtrue
9303     \nfss@text{\reset@font\bfseries ??}%
9304     \@latex@warning{%
9305       Reference `#2' on page \thepage\space undefined%
9306     }%
9307   \fi
9308 }
9309 \def\HyRef@testreftype#1.#2\.{%
9310   \ltx@ifundefined{#1autorefname}{%
9311     \ltx@ifundefined{#1name}{%
9312       \HyRef@StripStar#1\*\@nil{#1}%
9313       \ltx@ifundefined{\HyRef@name autorefname}{%
9314         \ltx@ifundefined{\HyRef@name name}{%
9315           \def\HyRef@currentHtag{%
9316             \Hy@Warning{No autoref name for `#1'}%
9317           }{%
9318             \edef\HyRef@currentHtag{%
9319               \expandafter\noexpand\csname\HyRef@name name\endcsname
9320               \noexpand~%
9321             }%
9322           }%
9323         }{%
9324           \edef\HyRef@currentHtag{%
9325             \expandafter\noexpand
9326             \csname\HyRef@name autorefname\endcsname
9327             \noexpand~%
```



```

9328     }%
9329     }%
9330   }{%
9331     \edef\HyRef@currentHtag{%
9332       \expandafter\noexpand\csname#1name\endcsname
9333       \noexpand~%
9334     }%
9335     }%
9336   }{%
9337     \edef\HyRef@currentHtag{%
9338       \expandafter\noexpand\csname#1autorefname\endcsname
9339       \noexpand~%
9340     }%
9341     }%
9342 }
9343 \def\HyRef@StripStar#1*\#2\@nil#3{%
9344   \def\HyRef@name{#2}%
9345   \ifx\HyRef@name\HyRef@CaseStar
9346     \def\HyRef@name{#1}%
9347   \else
9348     \def\HyRef@name{#3}%
9349   \fi
9350 }
9351 \def\HyRef@CaseStar{*\\}
9352 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9353 \let\HyRef@ShowKeysRef\@gobble
9354 \def\HyRef@ShowKeysInit{%
9355   \begingroup\expandafter\expandafter\expandafter\endgroup
9356   \expandafter\ifx\csname SK@@label\endcsname\relax
9357   \else
9358     \ifx\SK@ref\@empty
9359     \else
9360       \def\HyRef@ShowKeysRef{%
9361         \SK@\SK@@ref
9362       }%
9363     \fi
9364   \fi
9365 }
9366 \@ifpackageloaded{showkeys}{%
9367   \HyRef@ShowKeysInit
9368 }{%
9369   \Hy@AtBeginDocument{%
9370     \@ifpackageloaded{showkeys}{%
9371       \HyRef@ShowKeysInit
9372     }{}%
9373   }%
9374 }

```

Defaults for the names that \autoref uses.

```

9375 \providecommand*\AMSautorefname{\equationautorefname}
9376 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9377 \providecommand*\Itemautorefname{\itemautorefname}
9378 \providecommand*\itemautorefname{item}
9379 \providecommand*\equationautorefname{Equation}

```

```

9380 \providecommand*\footnoteautorefname{footnote}
9381 \providecommand*\itemautorefname{item}
9382 \providecommand*\figureautorefname{Figure}
9383 \providecommand*\tableautorefname{Table}
9384 \providecommand*\partautorefname{Part}
9385 \providecommand*\appendixautorefname{Appendix}
9386 \providecommand*\chapterautorefname{chapter}
9387 \providecommand*\sectionautorefname{section}
9388 \providecommand*\subsectionautorefname{subsection}
9389 \providecommand*\subsubsectionautorefname{subsubsection}
9390 \providecommand*\paragraphautorefname{paragraph}
9391 \providecommand*\subparagraphautorefname{subparagraph}
9392 \providecommand*\FancyVerbLineautorefname{line}
9393 \providecommand*\theoremautorefname{Theorem}
9394 \providecommand*\pageautorefname{page}
9395 \end{package}

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```

9396 (*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
9397 \begingroup\expandafter\expandafter\expandafter\endgroup
9398 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9399 \begingroup
9400 \catcode\| = 0 %
9401 \@makeother\| %
9402 |@firstofone{| \endgroup
9403 |def|Hy@pstringdef#1#2{%
9404 | \begingroup
9405 | \edef~{|string~}%
9406 | \xdef|Hy@gtemp{#2}%
9407 | \endgroup
9408 |let#1|Hy@gtemp
9409 |@onelevel@sanitize#1%
9410 | \edef#1{| \expandafter|Hy@ExchangeBackslash#1\|@nil}%
9411 | \edef#1{| \expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9412 | \edef#1{| \expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
9413 }%
9414 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9415 #1%
9416 |ifx|\#2|\% %
9417 |else
9418 \\\%
9419 |ltx@ReturnAfterFi{%
9420 |Hy@ExchangeBackslash#2|@nil
9421 }%
9422 |fi
9423 }%

```

```

9424 }%
9425 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9426   #1%
9427   \ifx\|#2\%
9428   \else
9429     \@backslashchar(%
9430     \ltx@ReturnAfterFi{%
9431       \Hy@ExchangeLeftParenthesis#2\@nil
9432     }%
9433   \fi
9434 }%
9435 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9436   #1%
9437   \ifx\|#2\%
9438   \else
9439     \@backslashchar)%
9440     \ltx@ReturnAfterFi{%
9441       \Hy@ExchangeRightParenthesis#2\@nil
9442     }%
9443   \fi
9444 }%
9445 \else
9446 \def\Hy@pstringdef#1#2{%
9447   \begingroup
9448   \edef~{\string~}%
9449   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9450   \endgroup
9451   \let#1\Hy@gtemp
9452 }%
9453 \fi
9454 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9455 <*pdfTeX>
9456 \providecommand*\XR@ext>{pdf}
9457 \Hy@setbreaklinks{true}
9458 \def\HyPat@ObjRef{%
9459   [0-9]*[1-9][0-9]* 0 R%
9460 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-081: `\pdfminorversion`

```

9461 \let\Hy@pdfminorversion\relax
9462 \begingroup\expandafter\expandafter\expandafter\endgroup
9463 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9464   \begingroup\expandafter\expandafter\expandafter\endgroup
9465   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9466   \else
9467     \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9468   \fi
9469 \else

```

```

9470 \def\Hy@pdfminorversion{\pdfminorversion}%
9471 \fi
9472 \@ifundefined{Hy@pdfminorversion}{%
9473   \PackageInfo{hyperref}{%
9474     PDF version is not set, because pdfTeX is too old (<1.10a)%
9475   }%
9476 }{%
9477   \ifHy@ocgcolorlinks
9478     \ifnum\Hy@pdfminorversion<5 %
9479       \kvsetkeys{Hyp}{pdfversion=1.5}%
9480     \fi
9481   \fi
9482   \ifHy@setpdfversion
9483     \ifnum\Hy@pdfversion<5 %
9484       \ltx@ifundefined{pdfobjcompresslevel}{%
9485         }{%
9486           \ifHy@verbose
9487             \Hy@InfoNoLine{%
9488               PDF object streams are disabled, because they are%
9489               \MessageBreak
9490               not supported in requested PDF version %
9491               1.\Hy@pdfversion
9492             }%
9493           \fi
9494           \pdfobjcompresslevel=\ltx@zero
9495         }%
9496       \fi
9497       \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9498       \else
9499         \let\Hy@temp\ltx@empty
9500         \def\Hy@temp@A#1#2{%
9501           \ifnum#1>\ltx@zero
9502             \edef\Hy@temp{%
9503               \Hy@temp
9504               \space\space
9505               \the#1\space #2%
9506               \ifnum#1=\ltx@one\else s\fi
9507               \MessageBreak
9508             }%
9509             \fi
9510           }%
9511           \Hy@temp@A\pdflastobj{PDF object}%
9512           \Hy@temp@A\pdflastxform{form XObject}%
9513           \Hy@temp@A\pdflastximage{image XObject}%
9514           \Hy@temp@A\pdflastannot{annotation}%
9515           \ltx@ifundefined{pdflastlink}{%
9516             }{%
9517               \Hy@temp@A\pdflastlink{link}%
9518             }%
9519           \ifx\Hy@temp\ltx@empty
9520             \Hy@pdfminorversion=\Hy@pdfversion\relax
9521           \else
9522             \let\Hy@temp@A\ltx@empty
9523             \ifnum\Hy@pdfversion=4 %
9524               \IfFileExists{pdf14.sty}{%
9525                 \def\Hy@temp@A{%
9526                   \MessageBreak

```

```

9527         Or \string\RequirePackage{pdf14} can be used%
9528         \MessageBreak
9529         before \string\documentclass\space as shortcut%
9530     }%
9531 }{}%
9532 \fi
9533 \Hy@WarningNoLine{%
9534     The PDF version number could not be set,\MessageBreak
9535     because some PDF objects are already written:%
9536     \MessageBreak
9537     \Hy@temp
9538     The version should be set as early as possible:%
9539     \MessageBreak
9540     \space\space
9541     \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9542     \string\relax
9543     \ifnum\Hy@pdfversion<5 %
9544         \ltx@ifundefined{pdfobjcompresslevel}{%
9545             }{%
9546                 \MessageBreak
9547                 \space\space
9548                 \string\pdfobjcompresslevel=0\string\relax
9549             }%
9550         }%
9551     \Hy@temp@A
9552 }%
9553 \fi
9554 \fi
9555 \PackageInfo{hyperref}{%
9556     \expandafter\string\Hy@pdfminorversion
9557     :=\number\Hy@pdfversion\space
9558 }%
9559 \fi
9560 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9561 }
9562 \Hy@DisableOption{pdfversion}%
9563 \ifHy@ocgcolorlinks
9564     \pdf@ifdraftmode{}{%
9565         \immediate\pdfobj{%
9566             <<%
9567             /Type/OCG%
9568             /Name(View)%
9569             /Usage<<%
9570             /Print<<%
9571             /PrintState/OFF%
9572             >>%
9573             /View<<%
9574             /ViewState/ON%
9575             >>%
9576             >>%
9577             >>%
9578         }%
9579         \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9580         \immediate\pdfobj{%
9581             <<%
9582             /Type/OCG%
9583             /Name(Print)%

```

```

9584      /Usage<<%
9585      /Print<<%
9586      /PrintState/ON%
9587      >>%
9588      /View<<%
9589      /ViewState/OFF%
9590      >>%
9591      >>%
9592      >>%
9593      }%
9594      \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9595      \immediate\pdfobj{%
9596      [%
9597      \OBJ@OCG@view\space\OBJ@OCG@print
9598      ]%
9599      }%
9600      \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9601      \pdfcatalog{%
9602      /OCProperties<<%
9603      /OCGs \OBJ@OCGs
9604      /D<<%
9605      /OFF[\OBJ@OCG@print]%
9606      /AS[%
9607      <<%
9608      /Event/View%
9609      /OCGs \OBJ@OCGs
9610      /Category[/View]%
9611      >>%
9612      <<%
9613      /Event/Print%
9614      /OCGs \OBJ@OCGs
9615      /Category[/Print]%
9616      >>%
9617      <<%
9618      /Event/Export%
9619      /OCGs \OBJ@OCGs
9620      /Category[/Print]%
9621      >>%
9622      ]%
9623      >>%
9624      >>%
9625      }%
9626      \begingroup
9627      \edef\x{\endgroup
9628      \pdfpageresources{%
9629      \the\pdfpageresources
9630      /Properties<<%
9631      /OCView \OBJ@OCG@view
9632      /OCPrint \OBJ@OCG@print
9633      >>%
9634      }%
9635      }%
9636      \x
9637      }%
9638      \Hy@AtBeginDocument{%
9639      \def\Hy@colorlink#1{%
9640      \begingroup

```

```

9641 \ifHy@ocgcolorlinks
9642 \def\Hy@ocgcolor{#1}%
9643 \setbox0=\hbox\bgroup\color@begingroup
9644 \else
9645 \HyColor@UseColor#1%
9646 \fi
9647 }%
9648 \def\Hy@endcolorlink{%
9649 \ifHy@ocgcolorlinks
9650 \color@endgroup\egroup
9651 \mbox{%
9652 \pdfliteral page{/OC/OCPrint BDC}%
9653 \rlap{\copy0}%
9654 \pdfliteral page{EMC/OC/OCView BDC}%
9655 \begingroup
9656 \expandafter\HyColor@UseColor\Hy@ocgcolor
9657 \box0 %
9658 \endgroup
9659 \pdfliteral page{EMC}%
9660 }%
9661 \fi
9662 \endgroup
9663 }%
9664 }%
9665 \else
9666 \Hy@DisableOption{ocgcolorlinks}%
9667 \fi

```

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

```

9668 \def\setpdfinkmargin#1{%
9669 \begingroup
9670 \setlength{\dimen@}{#1}%
9671 \expandafter\endgroup
9672 \expandafter\pdfinkmargin\the\dimen@\relax
9673 }
9674 \ifx\pdfstartlink\@undefined% less than version 14
9675 \let\pdfstartlink\pdfannotlink
9676 \let\pdfinkmargin\@tempdima
9677 \let\pdfxform\pdfform
9678 \let\pdflastxform\pdflastform
9679 \let\pdfrefxform\pdfrefform
9680 \else
9681 \pdfinkmargin1pt %
9682 \fi

```

First set up the default linking

```

9683 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9684 \Hy@WrapperDef\new@pdfink#1{%
9685 \ifhmode
9686 \@savsf\spacefactor
9687 \fi
9688 \Hy@SaveLastskip
9689 \Hy@VerboseAnchor{#1}%
9690 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9691 \Hy@DestName\Hy@pstringDest\@pdfview
9692 \Hy@RestoreLastskip
9693 \ifhmode

```

```

9694 \spacefactor\@savsf
9695 \fi
9696 }
9697 \let\pdf@endanchor\@empty

```

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

```

9698 \def\Hy@DestName#1#2{%
9699 \pdfdest name{#1}#2\relax
9700 }

```

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.

```

9701 \providecommand*\@pdfborder{0 0 1}
9702 \providecommand*\@pdfborderstyle{}
9703 \def\Hy@undefinedname{UNDEFINED}
9704 \def\find@pdflink#1#2{%
9705 \leavevmode
9706 \protected@edef\Hy@testname{#2}%
9707 \ifx\Hy@testname\@empty
9708 \Hy@Warning{%
9709 Empty destination name,\MessageBreak
9710 using '\Hy@undefinedname'%
9711 }%
9712 \let\Hy@testname\Hy@undefinedname
9713 \else
9714 \Hy@pstringdef\Hy@testname{%
9715 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9716 }%
9717 \fi
9718 \Hy@StartlinkName{%
9719 \ifHy@pdfa /F 4\fi
9720 \Hy@setpdfborder
9721 \Hy@setpdfhighlight
9722 \ifx\CurrentBorderColor\relax
9723 \else
9724 /C[\CurrentBorderColor]%
9725 \fi
9726 }\Hy@testname
9727 \expandafter\Hy@colorlink\csname @#1color\endcsname
9728 }
9729 \def\Hy@StartlinkName#1#2{%
9730 \pdfstartlink attr{#1}goto name{#2}\relax
9731 }
9732 \def\close@pdflink{%
9733 \Hy@endcolorlink
9734 \Hy@VerboseLinkStop
9735 \pdfendlink
9736 }
9737 \def\hyper@anchor#1{%
9738 \new@pdflink{#1}\anchor@spot\pdf@endanchor
9739 }
9740 \def\hyper@anchorstart#1{%
9741 \new@pdflink{#1}%
9742 \Hy@activeanchortrue

```



```

9743 }
9744 \def\hyper@anchorend{%
9745   \pdf@endanchor
9746   \Hy@activeanchorfalse
9747 }
9748 \def\hyper@linkstart#1#2{%
9749   \Hy@VerboseLinkStart{#1}{#2}%
9750   \ltx@ifundefined{##1bordercolor}{%
9751     \let\CurrentBorderColor\relax
9752   }{%
9753     \edef\CurrentBorderColor{\csname @##1bordercolor\endcsname}%
9754   }%
9755   \find@pdfink{#1}{#2}%
9756 }
9757 \def\hyper@linkend{\close@pdfink}
9758 \def\hyper@link#1#2#3{%
9759   \Hy@VerboseLinkStart{#1}{#2}%
9760   \ltx@ifundefined{##1bordercolor}{%
9761     \let\CurrentBorderColor\relax
9762   }{%
9763     \edef\CurrentBorderColor{\csname @##1bordercolor\endcsname}%
9764   }%
9765   \find@pdfink{#1}{#2}#3\Hy@xspace@end
9766   \close@pdfink
9767 }
9768 \let\CurrentBorderColor\@linkbordercolor
9769 \def\hyper@linkurl#1#2{%
9770   \begingroup
9771     \Hy@pstringdef\Hy@pstringURI{#2}%
9772     \hyper@chars
9773     \leavevmode
9774     \pdfstartlink
9775     attr{%
9776       \Hy@setpdfborder
9777       \Hy@setpdfhighlight
9778       \ifx\@urlbordercolor\relax
9779         \else
9780           /C[\@urlbordercolor]%
9781         \fi
9782     }%
9783     user{%
9784       /Subtype/Link%
9785       \ifHy@pdfa /F 4\fi
9786       /A<<%
9787       /Type/Action%
9788       /S/URI%
9789       /URI(\Hy@pstringURI)%
9790       \ifHy@href@ismap
9791         /IsMap true%
9792       \fi
9793       \Hy@href@nextactionraw
9794     >>%
9795     }%
9796     \relax
9797     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9798     \close@pdfink
9799   \endgroup

```

```

9800 }
9801 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9802   \begingroup
9803     \def\Hy@pstringF{#2}%
9804     \Hy@CleanupFile\Hy@pstringF
9805     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9806     \Hy@pstringdef\Hy@pstringD{#3}%
9807     \Hy@MakeRemoteAction
9808     \leavevmode
9809     \pdfstartlink
9810     attr{%
9811       \Hy@setpdfborder
9812       \Hy@setpdfhighlight
9813       \ifx\@filebordercolor\relax
9814         \else
9815           /C[\@filebordercolor]%
9816         \fi
9817     }%
9818     user {%
9819       /Subtype/Link%
9820       \ifHy@pdfa /F 4\fi
9821       /A<<%
9822       /F(\Hy@pstringF)%
9823       /S/GoToR%
9824       \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}

```

```

9825     \ifx\#3\%
9826       /D[\Hy@href@page\@pdfremotestartview]%
9827     \else
9828       /D(\Hy@pstringD)%
9829     \fi
9830     \Hy@href@nextactionraw
9831     >>%
9832   }%
9833   \relax
9834   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9835   \close@pdflink
9836 \endgroup
9837 }
9838 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9839   \begingroup
9840     \Hy@pstringdef\Hy@pstringF{#1}%
9841     \Hy@pstringdef\Hy@pstringP{#3}%
9842     \leavevmode
9843     \pdfstartlink
9844     attr{%

```

```

9845 \Hy@setpdfborder
9846 \Hy@setpdfhighlight
9847 \ifx\@runbordercolor\relax
9848 \else
9849 /C[\@runbordercolor]%
9850 \fi
9851 }%
9852 user {%
9853 /Subtype/Link%
9854 \ifHy@pdfa /F 4\fi
9855 /A<<%
9856 /F(\Hy@pstringF)%
9857 /S/Launch%
9858 \Hy@SetNewWindow
9859 \ifx\|#3\%
9860 \else
9861 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9862 \fi
9863 \Hy@href@nextactionraw
9864 >>%
9865 }%
9866 \relax
9867 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9868 \close@pdflink
9869 \endgroup
9870 }

```

\@pdfproducer

```

9871 \ifx\@pdfproducer\relax
9872 \begingroup\expandafter\expandafter\expandafter\endgroup
9873 \expandafter\ifx\csname luatexversion\endcsname\relax
9874 \def\@pdfproducer{pdfTeX}%
9875 \ifx\eTeXversion\@undefined
9876 \else
9877 \ifx\eTeXversion\relax
9878 \else
9879 \ifnum\eTeXversion>0 %
9880 \def\@pdfproducer{pdfeTeX}%
9881 \fi
9882 \fi
9883 \fi
9884 \ifx\pdfTeXversion\@undefined
9885 \else
9886 \ifnum\pdfTeXversion<100 %
9887 \edef\@pdfproducer{%
9888 \@pdfproducer
9889 \the\pdfTeXversion.\pdfTeXrevision
9890 }%
9891 \else
9892 \ifnum\pdfTeXversion<130 %
9893 \edef\@pdfproducer{%
9894 \@pdfproducer-%
9895 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9896 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9897 \pdfTeXrevision
9898 }%
9899 \else

```

```

9900      \ifnum\pdfTeXversion<140 %
9901      \else
9902      \def\@pdfproducer{pdfTeX}%
9903      \fi
9904      \edef\@pdfproducer{%
9905      \@pdfproducer-%
9906      \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9907      \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9908      \pdfTeXrevision
9909      }%
9910      \fi
9911      \fi
9912      \fi
9913      \else
9914      \begingroup
9915      \count@=\luatexversion
9916      \divide\count@ by 100 %
9917      \edef\x{\the\count@}%
9918      \count@=-\x\relax
9919      \multiply\count@ by 100 %
9920      \advance\count@ by \luatexversion
9921      \edef\x{\endgroup
9922      \def\noexpand\@pdfproducer{%
9923      LuaTeX-\x.\the\count@.\luatexrevision
9924      }%
9925      }%
9926      \x
9927      \fi
9928      \fi

```

\PDF@SetupDox

```

9929 \def\PDF@SetupDoc{%
9930 \ifx\@pdfpagescrop\@empty
9931 \else
9932 \edef\process@me{%
9933 \pdfpagesattr={%
9934 /CropBox[\@pdfpagescrop]%
9935 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9936 \else
9937 ^^J\the\pdfpagesattr
9938 \fi
9939 }%
9940 }%
9941 \process@me
9942 \fi
9943 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9944 \pdfcatalog{%
9945 /PageMode/\@pdfpagemode
9946 \ifx\@baseurl\@empty
9947 \else
9948 /URI<</Base(\Hy@pstringB)>>%
9949 \fi
9950 }%
9951 \ifx\@pdfstartpage\@empty
9952 \else
9953 \ifx\@pdfstartview\@empty
9954 \else
9955 openaction goto page\@pdfstartpage{\@pdfstartview}%

```

```

9956 \fi
9957 \fi
9958 \edef\Hy@temp{%
9959 \ifHy@pdftoolbar\else /HideToolbar true\fi
9960 \ifHy@pdfmenubar\else /HideMenubar true\fi
9961 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9962 \ifHy@pdfwindow /FitWindow true\fi
9963 \ifHy@pdfcenterwindow /CenterWindow true\fi
9964 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9965 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9966 \Hy@UseNameKey{Direction}\@pdfdirection
9967 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9968 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9969 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9970 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9971 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9972 \Hy@UseNameKey{Duplex}\@pdfduplex
9973 \ifx\@pdfpicktraybypdfsize\@empty
9974 \else
9975 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9976 \fi
9977 \ifx\@pdfprintpagerange\@empty
9978 \else
9979 /PrintPageRange[\@pdfprintpagerange]%
9980 \fi
9981 \ifx\@pdfnumcopies\@empty
9982 \else
9983 /NumCopies \@pdfnumcopies
9984 \fi
9985 }%
9986 \pdfcatalog{%
9987 \ifx\Hy@temp\@empty
9988 \else
9989 /ViewerPreferences<<\Hy@temp>>%
9990 \fi
9991 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9992 \ifx\@pdflang\relax
9993 \else
9994 /Lang(\@pdflang)%
9995 \fi
9996 }%
9997 }

```

\PDF@FinishDoc

```

9998 \def\PDF@FinishDoc{%
9999 \pdf@ifdraftmode{}\{%
10000 \Hy@UseMaketitleInfos
10001 \HyInfo@GenerateAddons
10002 \pdfinfo{%
10003 /Author(\@pdfauthor)%
10004 /Title(\@pdftitle)%
10005 /Subject(\@pdfsubject)%
10006 /Creator(\@pdfcreator)%
10007 \ifx\@pdfcreationdate\@empty
10008 \else
10009 /CreationDate(\@pdfcreationdate)%
10010 \fi
10011 \ifx\@pdfmoddate\@empty

```

```

10012 \else
10013 /ModDate(\@pdfmoddate)%
10014 \fi
10015 \ifx\@pdfproducer\relax
10016 \else
10017 /Producer(\@pdfproducer)%
10018 \fi
10019 /Keywords(\@pdfkeywords)%
10020 \ifx\@pdftrapped\@empty
10021 \else
10022 /Trapped/\@pdftrapped
10023 \fi
10024 \HyInfo@Addons
10025 }%
10026 }%
10027 \Hy@DisableOption{pdfauthor}%
10028 \Hy@DisableOption{pdftitle}%
10029 \Hy@DisableOption{pdfsubject}%
10030 \Hy@DisableOption{pdfcreator}%
10031 \Hy@DisableOption{pdfcreationdate}%
10032 \Hy@DisableOption{pdfmoddate}%
10033 \Hy@DisableOption{pdfproducer}%
10034 \Hy@DisableOption{pdfkeywords}%
10035 \Hy@DisableOption{pdftrapped}%
10036 \Hy@DisableOption{pdfinfo}%
10037 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpage-` `transition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10038 \def\hyper@pagetransition{%
10039 \ifx\@pdfpagetransition\relax
10040 \else
10041 \expandafter\Hy@RemoveTransPageAttr
10042 \the\pdfpageattr^^J/Trans{}}>>\END
10043 \ifx\@pdfpagetransition\@empty
10044 \else
10045 \edef\@processme{%
10046 \global\pdfpageattr{%
10047 \the\pdfpageattr
10048 ^^J/Trans << /S /\@pdfpagetransition\space >>%
10049 }%
10050 }%
10051 \@processme
10052 \fi
10053 \fi
10054 }

```

`\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.

```

10055 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10056 \ifx\#2\%
10057 \global\pdfpageattr{#1}%
10058 \else

```

```

10059 \Hy@RemoveTransPageAttr#1#4\END
10060 \fi
10061 }

```

`\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`.

```

10062 \def\hyper@pageduration{%
10063 \ifx\@pdfpageduration\relax
10064 \else
10065 \expandafter
10066 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10067 \ifx\@pdfpageduration\@empty
10068 \else
10069 \edef\@processme{%
10070 \global\pdfpageattr{%
10071 \the\pdfpageattr
10072 ^^J/Dur \@pdfpageduration\space
10073 }%
10074 }%
10075 \@processme
10076 \fi
10077 \fi
10078 }

```

`\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.

```

10079 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10080 \ifx\#2\%
10081 \global\pdfpageattr{#1}%
10082 \else
10083 \Hy@RemoveDurPageAttr#1#4\END
10084 \fi
10085 }

```

`\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).

```

10086 \def\hyper@pagehidden{%
10087 \ifHy@useHidKey
10088 \expandafter
10089 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10090 \ifHy@pdfpagehidden
10091 \edef\@processme{%
10092 \global\pdfpageattr{%
10093 \the\pdfpageattr
10094 ^^J/Hid true % SPACE
10095 }%
10096 }%
10097 \@processme
10098 \fi
10099 \fi
10100 }

```

`\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.

```

10101 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10102   \ifx\#2\%
10103     \global\pdfpageattr{#1}%
10104   \else
10105     \Hy@RemoveHidPageAttr#1#4\END
10106   \fi
10107 }

10108 \pdf@ifdraftmode{}{%
10109   \g@addto@macro\Hy@EveryPageHook{%
10110     \hyper@pagetransition
10111     \hyper@pageduration
10112     \hyper@pagehidden
10113   }%
10114 }

```

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

```

10115 </pdfTeX>
10116 <*pdfTeX | xetex>
10117 \Hy@AtBeginDocument{%
10118   \ifHy@setpagesize
10119     \expandafter\@firstofone
10120   \else
10121     \expandafter\@gobble
10122   \fi
10123 }%
10124 \@ifclassloaded{seminar}{%
10125 <*pdfTeX>
10126   \setlength{\pdfhorigin}{1truein}%
10127   \setlength{\pdfvorigin}{1truein}%
10128 </pdfTeX>
10129   \ifportrait
10130     \ifdim\paperwidth=\z@
10131     \else
10132       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10133     \fi
10134     \ifdim\paperheight=\z@
10135     \else
10136       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10137     \fi
10138   \else
10139     \ifdim\paperheight=\z@
10140     \else
10141       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10142     \fi
10143     \ifdim\paperwidth=\z@
10144     \else
10145       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10146     \fi
10147   \fi
10148 }{%
10149   \ltx@ifundefined{stockwidth}{%

```



```

10150 \ifdim\paperwidth>\z@
10151 \setlength{\pdfpagewidth}{\paperwidth}%
10152 \fi
10153 \ifdim\paperheight>\z@
10154 \setlength{\pdfpageheight}{\paperheight}%
10155 \fi
10156 }{%
10157 \ifdim\stockwidth>\z@
10158 \setlength{\pdfpagewidth}{\stockwidth}%
10159 \fi
10160 \ifdim\stockheight>\z@
10161 \setlength{\pdfpageheight}{\stockheight}%
10162 \fi
10163 }%
10164 }%
10165 }%
10166 \Hy@DisableOption{setpagesize}%
10167 }
10168 </pdftex|xetex>
10169 <*pdftex>
10170 \def\Acrobatmenu#1#2{%
10171 \Hy@Acrobatmenu{#1}{#2}{%
10172 \leavevmode
10173 \EdefEscapeName\Hy@temp@menu{#1}%
10174 \pdfstartlink
10175 attr{%
10176 \Hy@setpdfborder
10177 \Hy@setpdfhighlight
10178 \ifx\@menubordercolor\relax
10179 \else
10180 /C[\@menubordercolor]%
10181 \fi
10182 }%
10183 user{%
10184 /Subtype/Link%
10185 \ifHy@pdfa /F 4\fi
10186 /A<<%
10187 /S/Named%
10188 /N/\Hy@temp@menu
10189 \Hy@href@nextactionraw
10190 >>%
10191 }%
10192 \relax
10193 \Hy@colorlink\@menucolor#2%
10194 \close@pdflink
10195 }%
10196 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package ‘atbegshi’ `\AtBeginShipoutFirst` does not add a additional box layer.

```

10197 \def\Hy@FixNotFirstPage{%
10198   \gdef\Hy@FixNotFirstPage{%
10199     \setbox\AtBeginShipoutBox=\hbox{%
10200       \copy\AtBeginShipoutBox
10201     }%
10202   }%
10203 }
10204 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10205 }{%
10206   \AtBeginShipout{\Hy@FixNotFirstPage}%
10207 }
10208 \pdfTeX

```

47.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that ‘” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10209 \*hypertex
10210 \providecommand*\XR@ext{}{dvi}
10211 \let\PDF@FinishDoc\ltx@empty
10212 \def\PDF@SetupDoc{%
10213   \ifx\@baseurl\@empty
10214     \else
10215       \special{html:<base href="\@baseurl">}%

```

```

10216 \fi
10217 }
10218 \Hy@WrapperDef\hyper@anchor#1{%
10219 \Hy@SaveLastskip
10220 \Hy@VerboseAnchor{#1}%
10221 \begingroup
10222 \let\protect=\string
10223 \hyper@chars
10224 \special{html:<a name=%
10225 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10226 \endgroup
10227 \Hy@activeanchortrue
10228 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10229 \special{html:</a>}%
10230 \Hy@activeanchorfalse
10231 \Hy@RestoreLastskip
10232 }
10233 \Hy@WrapperDef\hyper@anchorstart#1{%
10234 \Hy@SaveLastskip
10235 \Hy@VerboseAnchor{#1}%
10236 \begingroup
10237 \hyper@chars
10238 \special{html:<a name=%
10239 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10240 \endgroup
10241 \Hy@activeanchortrue
10242 }
10243 \def\hyper@anchorend{%
10244 \special{html:</a>}%
10245 \Hy@activeanchorfalse
10246 \Hy@RestoreLastskip
10247 }
10248 \def\@urlltype{url}
10249 \def\hyper@linkstart#1#2{%
10250 \Hy@VerboseLinkStart{#1}{#2}%
10251 \expandafter\Hy@colorlink\csname @#1color\endcsname
10252 \def\Hy@tempa{#1}%
10253 \ifx\Hy@tempa\@urlltype
10254 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10255 \else
10256 \begingroup
10257 \hyper@chars
10258 \special{html:<a href=%
10259 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10260 \endgroup
10261 \fi
10262 }
10263 \def\hyper@linkend{%
10264 \special{html:</a>}%
10265 \Hy@endcolorlink
10266 }
10267 \def\hyper@linkfile#1#2#3{%
10268 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10269 }
10270 \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.

```

10271 \leavevmode
10272 \ifHy@raiselinks
10273 \Hy@SaveSpaceFactor
10274 \Hy@SaveSavedSpaceFactor
10275 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10276 \Hy@RestoreSavedSpaceFactor
10277 \@linkdim\dp\@tempboxa
10278 \lower\@linkdim\hbox{%
10279 \hyper@chars
10280 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10281 }%
10282 \Hy@colorlink\@urlcolor
10283 \Hy@RestoreSpaceFactor
10284 #1%
10285 \Hy@SaveSpaceFactor
10286 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

10287 \advance\@linkdim by -6.5\p@
10288 \raise\@linkdim\hbox{\special{html:</a>}}%
10289 \Hy@endcolorlink
10290 \Hy@RestoreSpaceFactor
10291 \else
10292 \begingroup
10293 \hyper@chars
10294 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10295 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10296 \special{html:</a>}}%
10297 \Hy@endcolorlink
10298 \endgroup
10299 \fi
10300 }

```

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

```

10301 \def\hyper@link#1#2#3{%
10302 \Hy@VerboseLinkStart{#1}{#2}%
10303 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}}%
10304 }

10305 \def\hyper@image#1#2{%
10306 \begingroup
10307 \hyper@chars
10308 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10309 \endgroup
10310 }
10311 </hypertex>
10312 <*\dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links

to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

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

```

10313 \providecommand*\XR@ext}{dvi}
10314 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10315 \Hy@WrapperDef\hyper@anchor#1{%
10316   \Hy@SaveLastskip
10317   \Hy@VerboseAnchor{#1}%
10318   \begingroup
10319     \let\protect=\string
10320     \special{mark: #1}%
10321   \endgroup
10322   \Hy@activeanchortrue
10323   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10324   \Hy@activeanchorfalse
10325   \Hy@RestoreLastskip
10326 }
10327 \Hy@WrapperDef\hyper@anchorstart#1{%
10328   \Hy@SaveLastskip
10329   \Hy@VerboseAnchor{#1}%
10330   \special{mark: #1}%
10331   \Hy@activeanchortrue
10332 }
10333 \def\hyper@anchorend{%
10334   \Hy@activeanchorfalse
10335   \Hy@RestoreLastskip
10336 }
10337 \def\hyper@linkstart#1#2{%
10338   \Hy@VerboseLinkStart{#1}{#2}%
10339   \expandafter\Hy@colorlink\csname @#1color\endcsname
10340   \special{button: %
10341     10000000 %
10342     \number\baselineskip\space
10343     #2%
10344   }%
10345 }
10346 \def\hyper@linkend{%
10347   \Hy@endcolorlink
10348 }
10349 \def\hyper@link#1#2#3{%
10350   \Hy@VerboseLinkStart{#1}{#2}%
10351   \leavevmode
10352   \ifHy@raiselinks
10353     \Hy@SaveSpaceFactor
10354     \Hy@SaveSavedSpaceFactor
10355     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10356     \Hy@RestoreSavedSpaceFactor
10357     \@linkdim\dp\@tempboxa
10358     \lower\@linkdim\hbox{%
10359       \special{button: %
10360         \number\wd\@tempboxa\space
10361         \number\ht\@tempboxa\space
10362         #2%

```

```

10363 }%
10364 \expandafter\Hy@colorlink\csname @#1color\endcsname
10365 \Hy@RestoreSpaceFactor
10366 #3\Hy@xspace@end
10367 \Hy@SaveSpaceFactor
10368 \Hy@endcolorlink
10369 }%
10370 \@linkdim\ht\@tempboxa
10371 \advance\@linkdim by -6.5\p@
10372 \raise\@linkdim\hbox{}%
10373 \Hy@RestoreSpaceFactor
10374 \else
10375 \special{button: %
10376 \number\wd\@tempboxa\space
10377 \number\ht\@tempboxa\space
10378 #2%
10379 }%
10380 \expandafter\Hy@colorlink\csname @#1color\endcsname
10381 #3\Hy@xspace@end
10382 \Hy@endcolorlink
10383 \fi
10384 }
10385 \def\hyper@linkurl#1#2{%
10386 \begingroup
10387 \hyper@chars
10388 \leavevmode
10389 \ifHy@raiselinks
10390 \Hy@SaveSpaceFactor
10391 \Hy@SaveSavedSpaceFactor
10392 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10393 \Hy@RestoreSavedSpaceFactor
10394 \@linkdim\dp\@tempboxa
10395 \lower\@linkdim\hbox{%
10396 \special{button: %
10397 \number\wd\@tempboxa\space
10398 \number\ht\@tempboxa\space
10399 launch: \wwwbrowser\space
10400 #2%
10401 }%
10402 \Hy@colorlink\@urlcolor
10403 \Hy@RestoreSpaceFactor
10404 #1\Hy@xspace@end
10405 \Hy@SaveSpaceFactor
10406 \Hy@endcolorlink
10407 }%
10408 \@linkdim\ht\@tempboxa
10409 \advance\@linkdim by -6.5\p@
10410 \raise\@linkdim\hbox{}%
10411 \Hy@RestoreSpaceFactor
10412 \else
10413 \special{button: %
10414 \number\wd\@tempboxa\space
10415 \number\ht\@tempboxa\space
10416 launch: \wwwbrowser\space
10417 #2%
10418 }%
10419 \Hy@colorlink\@urlcolor

```

```

10420      #1\Hy@xspace@end
10421      \Hy@endcolorlink
10422      \fi
10423      \endgroup
10424  }
10425  \def\hyper@linkfile#1#2#3{%
10426      \begingroup
10427      \hyper@chars
10428      \leavevmode
10429      \ifHy@raiselinks
10430          \Hy@SaveSpaceFactor
10431          \Hy@SaveSavedSpaceFactor
10432          \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10433          \Hy@RestoreSavedSpaceFactor
10434          \@linkdim\dp\@tempboxa
10435          \lower\@linkdim\hbox{%
10436              \special{button: %
10437                  \number\wd\@tempboxa\space
10438                  \number\ht\@tempboxa\space
10439                  #3,%
10440                  file: #2%
10441              }%
10442              \Hy@colorlink\@filecolor
10443              \Hy@RestoreSpaceFactor
10444              #1\Hy@xspace@end
10445              \Hy@SaveSpaceFactor
10446              \Hy@endcolorlink
10447          }%
10448          \@linkdim\ht\@tempboxa
10449          \advance\@linkdim by -6.5\p@
10450          \raise\@linkdim\hbox{}%
10451          \Hy@RestoreSpaceFactor
10452      \else
10453          \special{button: %
10454              \number\wd\@tempboxa\space
10455              \number\ht\@tempboxa\space
10456              #3,%
10457              file: #2%
10458          }%
10459          \Hy@colorlink\@filecolor
10460          #1\Hy@xspace@end
10461          \Hy@endcolorlink
10462      \fi
10463      \endgroup
10464  }
10465  \ifx\@pdfproducer\relax
10466      \def\@pdfproducer{dviwindo + Distiller}%
10467  \fi
10468  \HyInfo@AddonUnsupportedtrue
10469  \def\PDF@FinishDoc{%
10470      \Hy@UseMaketitleInfos
10471      \HyInfo@TrappedUnsupported
10472      \special{PDF: Keywords \@pdfkeywords}%
10473      \special{PDF: Title \@pdftitle}%
10474      \special{PDF: Creator \@pdfcreator}%
10475      \ifx\@pdfcreationdate\@empty
10476      \else

```

```

10477 \special{PDF: CreationDate \@pdfcreationdate}%
10478 \fi
10479 \ifx\@pdfmoddate\@empty
10480 \else
10481 \special{PDF: ModDate \@pdfmoddate}%
10482 \fi
10483 \special{PDF: Author \@pdfauthor}%
10484 \ifx\@pdfproducer\relax
10485 \else
10486 \special{PDF: Producer \@pdfproducer}%
10487 \fi
10488 \special{PDF: Subject \@pdfsubject}%
10489 \Hy@DisableOption{pdfauthor}%
10490 \Hy@DisableOption{pdftitle}%
10491 \Hy@DisableOption{pdfsubject}%
10492 \Hy@DisableOption{pdfcreator}%
10493 \Hy@DisableOption{pdfcreationdate}%
10494 \Hy@DisableOption{pdfmoddate}%
10495 \Hy@DisableOption{pdfproducer}%
10496 \Hy@DisableOption{pdfkeywords}%
10497 \Hy@DisableOption{pdftrapped}%
10498 \Hy@DisableOption{pdfinfo}%
10499 }
10500 \def\PDF@SetupDoc{%
10501 \ifx\@baseurl\@empty
10502 \else
10503 \special{PDF: Base \@baseurl}%
10504 \fi
10505 \ifx\@pdfpagescrop\@empty\else
10506 \special{PDF: BBox \@pdfpagescrop}%
10507 \fi
10508 \def\Hy@temp{}%
10509 \ifx\@pdfstartpage\@empty
10510 \else
10511 \ifx\@pdfstartview\@empty
10512 \else
10513 \edef\Hy@temp{%
10514 ,Page=\@pdfstartpage
10515 ,View=\@pdfstartview
10516 }%
10517 \fi
10518 \fi
10519 \edef\Hy@temp{%
10520 \noexpand\pdfmark{%
10521 pdfmark=/DOCVIEW,%
10522 PageMode=/\@pdfpagemode
10523 \Hy@temp
10524 }%
10525 }%
10526 \Hy@temp
10527 \ifx\@pdfpagescrop\@empty
10528 \else
10529 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10530 \fi
10531 \edef\Hy@temp{%
10532 \ifHy@pdftoolbar\else /HideToolbar true\fi
10533 \ifHy@pdfmenubar\else /HideMenubar true\fi

```



```

10534 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10535 \ifHy@pdffitwindow /FitWindow true\fi
10536 \ifHy@pdfcenterwindow /CenterWindow true\fi
10537 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10538 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10539 \Hy@UseNameKey{Direction}\@pdfdirection
10540 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10541 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10542 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10543 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10544 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10545 \Hy@UseNameKey{Duplex}\@pdfduplex
10546 \ifx\@pdfpicktraybypdfsize\@empty
10547 \else
10548 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10549 \fi
10550 \ifx\@pdfprintpagerange\@empty
10551 \else
10552 /PrintPageRange[\@pdfprintpagerange]%
10553 \fi
10554 \ifx\@pdfnumcopies\@empty
10555 \else
10556 /NumCopies \@pdfnumcopies
10557 \fi
10558 }%
10559 \pdfmark{pdfmark=/PUT,%
10560 Raw={%
10561 \string{Catalog\string}<<%
10562 \ifx\Hy@temp\@empty
10563 \else
10564 /ViewerPreferences<<\Hy@temp>>%
10565 \fi
10566 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10567 \ifx\@pdflang\relax
10568 \else
10569 /Lang(\@pdflang)%
10570 \fi
10571 >>%
10572 }%
10573 }%
10574 }
10575 </dviwindo>
10576 <*dvipdfm|xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10577 \providecommand*{\XR@ext}{pdf}
10578 \Hy@setbreaklinks{true}
10579 \def\HyPat@ObjRef{%
10580 @[\^ ]+}%
10581 }
10582 \newsavebox{\pdfm@box}
10583 \def\@pdfm@mark#1{\special{pdf:#1}}
10584 \Hy@WrapperDef\@pdfm@dest#1{%
10585 \Hy@SaveLastskip
10586 \Hy@VerboseAnchor{#1}%

```

```

10587 \begingroup
10588 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10589 \def\x{XYZ}%
10590 \ifx\x\@pdfview
10591 \def\x{XYZ @xpos @ypos null}%
10592 \else
10593 \def\x{FitH}%
10594 \ifx\x\@pdfview
10595 \def\x{FitH @ypos}%
10596 \else
10597 \def\x{FitBH}%
10598 \ifx\x\@pdfview
10599 \def\x{FitBH @ypos}%
10600 \else
10601 \def\x{FitV}%
10602 \ifx\x\@pdfview
10603 \def\x{FitV @xpos}%
10604 \else
10605 \def\x{FitBV}%
10606 \ifx\x\@pdfview
10607 \def\x{FitBV @xpos}%
10608 \else
10609 \def\x{Fit}%
10610 \ifx\x\@pdfview
10611 \let\x\@pdfview
10612 \else
10613 \def\x{FitB}%
10614 \ifx\x\@pdfview
10615 \let\x\@pdfview
10616 \else
10617 \def\x{FitR}%
10618 \ifx\x\@pdfview
10619 \Hy@Warning{\`pdfview=FitR' is not supported}%
10620 \def\x{XYZ @xpos @ypos null}%
10621 \else
10622 \@onelevel@sanitize\@pdfview
10623 \Hy@Warning{%
10624   Unknown value `\'@pdfview' for pdfview%
10625 }%
10626 \def\x{XYZ @xpos @ypos null}%
10627 \fi
10628 \fi
10629 \fi
10630 \fi
10631 \fi
10632 \fi
10633 \fi
10634 \fi
10635 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10636 \endgroup
10637 \Hy@RestoreLastskip
10638 }
10639 \providecommand*\@pdfview{XYZ}
10640 \providecommand*\@pdfborder{0 0 1}
10641 \providecommand*\@pdfborderstyle{}
10642 \def\hyper@anchor#1{%
10643 \@pdfm@dest{#1}%

```

```

10644 }
10645 \def\hyper@anchorstart#1{%
10646   \Hy@activeanchortrue
10647   \@pdfm@dest{#1}%
10648 }
10649 \def\hyper@anchorend{%
10650   \Hy@activeanchorfalse
10651 }

10652 \newcounter{Hy@AnnotLevel}

10653 \ifHy@ocgcolorlinks
10654   \def\OBJ@OCG@view{@OCG@view}%
10655   \@pdfm@mark{%
10656     obj \OBJ@OCG@view <<%
10657     /Type/OCG%
10658     /Name(View)%
10659     /Usage<<%
10660     /Print<<%
10661     /PrintState/OFF%
10662     >>%
10663     /View<<%
10664     /ViewState/ON%
10665     >>%
10666     >>%
10667     >>%
10668   }%
10669   \@pdfm@mark{close \OBJ@OCG@view}%
10670   \def\OBJ@OCG@print{@OCG@print}%
10671   \@pdfm@mark{%
10672     obj \OBJ@OCG@print <<%
10673     /Type/OCG%
10674     /Name(Print)%
10675     /Usage<<%
10676     /Print<<%
10677     /PrintState/ON%
10678     >>%
10679     /View<<%
10680     /ViewState/OFF%
10681     >>%
10682     >>%
10683     >>%
10684   }%
10685   \@pdfm@mark{close \OBJ@OCG@print}%
10686   \def\OBJ@OCGs{@OCGs}%
10687   \@pdfm@mark{%
10688     obj \OBJ@OCGs [%
10689       \OBJ@OCG@view\space\OBJ@OCG@print
10690     ]%
10691   }%
10692   \@pdfm@mark{close \OBJ@OCGs}%
10693   \@pdfm@mark{%
10694     put @catalog <<%
10695     /OCProperties<<%
10696     /OCGs \OBJ@OCGs
10697     /D<<%
10698     /OFF[\OBJ@OCG@print]%
10699     /AS[%
10700       <<%

```

```

10701         /Event/View%
10702         /OCGs \OBJ@OCGs
10703         /Category[/View]%
10704     >>%
10705     <<%
10706         /Event/Print%
10707         /OCGs \OBJ@OCGs
10708         /Category[/Print]%
10709     >>%
10710     <<%
10711         /Event/Export%
10712         /OCGs \OBJ@OCGs
10713         /Category[/Print]%
10714     >>%
10715     ]%
10716     >>%
10717     >>%
10718     >>%
10719 }%
10720 \AtBeginShipout{%
10721     \setbox\AtBeginShipoutBox=\hbox{%
10722         \copy\AtBeginShipoutBox
10723         \@pdfm@mark{%
10724             put @resources <<%
10725                 /Properties<<%
10726                 /OCView \OBJ@OCG@view
10727                 /OCPrint \OBJ@OCG@print
10728             >>%
10729             >>%
10730         }%
10731     }%
10732 }%
10733 \Hy@AtBeginDocument{%
10734     \def\Hy@colorlink#1{%
10735         \begingroup
10736             \ifHy@ocgcolorlinks
10737                 \def\Hy@ocgcolor{#1}%
10738                 \setbox0=\hbox\bgroup\color@begingroup
10739             \else
10740                 \HyColor@UseColor#1%
10741             \fi
10742     }%
10743     \def\Hy@endcolorlink{%
10744         \ifHy@ocgcolorlinks
10745             \color@endgroup\egroup
10746             \mbox{%
10747                 \@pdfm@mark{content /OC/OCPrint BDC}%
10748                 \rlap{\copy0}%
10749                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10750             \begingroup
10751                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10752                 \box0 %
10753             \endgroup
10754             \@pdfm@mark{content EMC}%
10755         }%
10756     \fi
10757 \endgroup

```

```

10758 }%
10759 }%
10760 \else
10761 \Hy@DisableOption{ocgcolorlinks}%
10762 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10763 \def\Hy@BeginAnnot#1{%
10764 \global\advance\c@Hy@AnnotLevel\@ne
10765 \ifnum\c@Hy@AnnotLevel=\@ne
10766 #1%
10767 \fi
10768 }
10769 \def\Hy@endAnnot{%
10770 \ifnum\value{Hy@AnnotLevel}=\@ne
10771 \Hy@endcolorlink
10772 \@pdfm@mark{eann}%
10773 \fi
10774 \global\advance\c@Hy@AnnotLevel\m@ne
10775 }

10776 \def\Hy@undefinedname{UNDEFINED}
10777 \def\hyper@linkstart#1#2{%
10778 \Hy@VerboseLinkStart{#1}{#2}%
10779 \leavevmode
10780 \Hy@BeginAnnot{%
10781 \protected@edef\Hy@testname{#2}%
10782 \ifx\Hy@testname\@empty
10783 \Hy@Warning{%
10784 Empty destination name,\MessageBreak
10785 using '\Hy@undefinedname'%
10786 }%
10787 \let\Hy@testname\Hy@undefinedname
10788 \else
10789 \Hy@pstringdef\Hy@testname{%
10790 \expandafter\HyperDestNameFilter\expandafter{%
10791 \Hy@testname
10792 }%
10793 }%
10794 \fi
10795 \@pdfm@mark{%
10796 bann<<%
10797 /Type/Annot%
10798 /Subtype/Link%
10799 \ifHy@pdfa /F 4\fi
10800 \Hy@setpdfborder
10801 \Hy@setpdfhighlight
10802 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10803 \else
10804 /C[\csname @#1bordercolor\endcsname]%
10805 \fi
10806 /A<<%
10807 /S/GoTo%
10808 /D(\Hy@testname)%
10809 \Hy@href@nextactionraw
10810 >>%
10811 >>%

```

```

10812 }%
10813 \expandafter\Hy@colorlink\csname @#1color\endcsname
10814 }%
10815 }
10816 \def\hyper@linkend{\Hy@EndAnnot}%
10817 \def\hyper@link#1#2#3{%
10818 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10819 }
10820 \def\hyper@linkfile#1#2#3{%
10821 \leavevmode
10822 \Hy@BeginAnnot{%
10823 \def\Hy@pstringF{#2}%
10824 \Hy@CleanupFile\Hy@pstringF
10825 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10826 \Hy@pstringdef\Hy@pstringD{#3}%
10827 \Hy@MakeRemoteAction
10828 \@pdfm@mark{%
10829 bann<<%
10830 /Type/Annot%
10831 /Subtype/Link%
10832 \ifHy@pdfa /F 4\fi
10833 \Hy@setpdfborder
10834 \Hy@setpdfhighlight
10835 \ifx\@filebordercolor\relax
10836 \else
10837 /C[\@filebordercolor]%
10838 \fi
10839 /A<<%
10840 /S/GoToR%
10841 /F(\Hy@pstringF)%
10842 /D%
10843 \ifx\#3\%
10844 [\Hy@href@page\@pdfremotestartview]%
10845 \else
10846 (\Hy@pstringD)%
10847 \fi
10848 \Hy@SetNewWindow
10849 \Hy@href@nextactionraw
10850 >>%
10851 >>%
10852 }%
10853 \Hy@colorlink\@filecolor
10854 }%
10855 #1\Hy@xspace@end
10856 \Hy@EndAnnot
10857 }
10858 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10859 \leavevmode
10860 \Hy@BeginAnnot{%
10861 \Hy@pstringdef\Hy@pstringF{#1}%
10862 \Hy@pstringdef\Hy@pstringP{#3}%
10863 \@pdfm@mark{%
10864 bann<<%
10865 /Type/Annot%
10866 /Subtype/Link%
10867 \ifHy@pdfa /F 4\fi
10868 \Hy@setpdfborder

```

```

10869 \Hy@setpdfhighlight
10870 \ifx\@runbordercolor\relax
10871 \else
10872 /C[\@runbordercolor]%
10873 \fi
10874 /A<<%
10875 /F(\Hy@pstringF)%
10876 /S/Launch%
10877 \Hy@SetNewWindow
10878 \ifx\#3\%
10879 \else
10880 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10881 \fi
10882 \Hy@href@nextactionraw
10883 >>%
10884 >>%
10885 }%
10886 \Hy@colorlink\@runcolor
10887 }%
10888 #2\Hy@xspace@end
10889 \Hy@EndAnnot
10890 }
10891 \def\hyper@linkurl#1#2{%
10892 \leavevmode
10893 \Hy@BeginAnnot{%
10894 \Hy@pstringdef\Hy@pstringURI{#2}%
10895 \@pdfm@mark{%
10896 bann<<%
10897 /Type/Annot%
10898 /Subtype/Link%
10899 \ifHy@pdfa /F 4\fi
10900 \Hy@setpdfborder
10901 \Hy@setpdfhighlight
10902 \ifx\@urlbordercolor\relax
10903 \else
10904 /C[\@urlbordercolor]%
10905 \fi
10906 /A<<%
10907 /S/URI%
10908 /URI(\Hy@pstringURI)%
10909 \ifHy@href@ismap
10910 /IsMap true%
10911 \fi
10912 \Hy@href@nextactionraw
10913 >>%
10914 >>%
10915 }%
10916 \Hy@colorlink\@urlcolor
10917 }%
10918 #1\Hy@xspace@end
10919 \Hy@EndAnnot
10920 }
10921 \def\Acrobatmenu#1#2{%
10922 \Hy@Acrobatmenu{#1}{#2}{%
10923 \Hy@BeginAnnot{%
10924 \EdefEscapeName\Hy@temp@menu{#1}%
10925 \@pdfm@mark{%

```

```

10926      bann<<%
10927          /Type/Annot%
10928          /Subtype/Link%
10929          \ifHy@pdfa /F 4\fi
10930          \Hy@setpdfborder
10931          \Hy@setpdfhighlight
10932          \ifx\@menubordercolor\relax
10933          \else
10934              /C[\@menubordercolor]%
10935          \fi
10936          /A<<%
10937          /S/Named%
10938          /N/\Hy@temp@menu
10939          \Hy@href@nextactionraw
10940      >>%
10941  >>%
10942  }%
10943  \Hy@colorlink\@menucolor
10944  }%
10945  #2\Hy@xspace@end
10946  \Hy@endannot
10947  }%
10948  }
10949  \ifx\@pdfproducer\relax
10950  \def\@pdfproducer{dvi.pdfm}%

```

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

```

10951  \begingroup\expandafter\expandafter\expandafter\endgroup
10952  \expandafter\ifx\csname XeTeXversion\endcsname\relax
10953  \else
10954  \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10955  \fi
10956  \fi
10957  \def\PDF@FinishDoc{%
10958  \Hy@UseMaketitleInfos
10959  \Hy@Info@GenerateAddons
10960  \@pdfm@mark{%
10961  docinfo<<%
10962      /Title(\@pdftitle)%
10963      /Subject(\@pdfsubject)%
10964      /Creator(\@pdfcreator)%
10965      \ifx\@pdfcreationdate\@empty
10966      \else
10967          /CreationDate(\@pdfcreationdate)%
10968      \fi
10969      \ifx\@pdfmoddate\@empty
10970      \else
10971          /ModDate(\@pdfmoddate)%
10972      \fi
10973      /Author(\@pdfauthor)%
10974      \ifx\@pdfproducer\relax
10975      \else
10976          /Producer(\@pdfproducer)%
10977      \fi
10978      /Keywords(\@pdfkeywords)%
10979      \ifx\@pdftrapped\@empty
10980      \else
10981          /Trapped/\@pdftrapped

```



```

10982     \fi
10983     \HyInfo@Addons
10984     >>%
10985 }%
10986 \Hy@DisableOption{pdfauthor}%
10987 \Hy@DisableOption{pdftitle}%
10988 \Hy@DisableOption{pdfsubject}%
10989 \Hy@DisableOption{pdfcreator}%
10990 \Hy@DisableOption{pdfcreationdate}%
10991 \Hy@DisableOption{pdfmoddate}%
10992 \Hy@DisableOption{pdfproducer}%
10993 \Hy@DisableOption{pdfkeywords}%
10994 \Hy@DisableOption{pdftrapped}%
10995 \Hy@DisableOption{pdfinfo}%
10996 }

10997 \def\PDF@SetupDoc{%
10998   \edef\Hy@temp{%
10999     \ifHy@pdftoolbar\else /HideToolbar true\fi
11000     \ifHy@pdfmenubar\else /HideMenubar true\fi
11001     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11002     \ifHy@pdfwindow /FitWindow true\fi
11003     \ifHy@pdfcenterwindow /CenterWindow true\fi
11004     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11005     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11006     \Hy@UseNameKey{Direction}\@pdfdirection
11007     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11008     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11009     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11010     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11011     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11012     \Hy@UseNameKey{Duplex}\@pdfduplex
11013     \ifx\@pdfpicktraybypdfsize\@empty
11014       \else
11015         /PickTrayByPDFSize \@pdfpicktraybypdfsize
11016       \fi
11017     \ifx\@pdfprintpagerange\@empty
11018       \else
11019         /PrintPageRange[\@pdfprintpagerange]%
11020       \fi
11021     \ifx\@pdfnumcopies\@empty
11022       \else
11023         /NumCopies \@pdfnumcopies
11024       \fi
11025   }%
11026   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11027   \@pdfm@mark{%
11028     docview<<%
11029     \ifx\@pdfstartpage\@empty
11030     \else
11031       \ifx\@pdfstartview\@empty
11032       \else
11033         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11034       \fi
11035     \fi
11036     \ifx\@baseurl\@empty
11037     \else
11038       /URI<</Base(\Hy@pstringB)>>%

```

```

11039 \fi
11040 /PageMode/\@pdfpagemode
11041 \ifx\Hy@temp\@empty
11042 \else
11043 /ViewerPreferences<<\Hy@temp>>%
11044 \fi
11045 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11046 \ifx\@pdflang\relax
11047 \else
11048 /Lang(\@pdflang)%
11049 \fi
11050 >>%
11051 }%
11052 \ifx\@pdfpagescrop\@empty
11053 \else
11054 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}}%
11055 \fi
11056 }
11057 </dvipdfm | xetex>
11058 (*dvipdfm | xetex)

```

\hyper@pagetransition

```

11059 \def\hyper@pagetransition{%
11060 \ifx\@pdfpagetransition\relax
11061 \else
11062 \ifx\@pdfpagetransition\@empty
11063 \else
11064 \special{pdf:put @thispage %
11065 <</Trans<</S/\@pdfpagetransition>>>>%
11066 }%
11067 \fi
11068 \fi
11069 }

```

\hyper@pageduration

```

11070 \def\hyper@pageduration{%
11071 \ifx\@pdfpageduration\relax
11072 \else
11073 \ifx\@pdfpageduration\@empty
11074 \else
11075 \special{pdf:put @thispage %
11076 <</Dur \@pdfpageduration>>>%
11077 }%
11078 \fi
11079 \fi
11080 }

```

\hyper@pagehidden

```

11081 \def\hyper@pagehidden{%
11082 \ifHy@useHidKey
11083 \special{pdf:put @thispage %
11084 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11085 }%
11086 \fi
11087 }

11088 \g@addto@macro\Hy@EveryPageBoxHook{%

```

```

11089 \hyper@pagetransition
11090 \hyper@pageduration
11091 \hyper@pagehidden
11092 }
11093 </dvipdfm | xetex>

```

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

```

11094 <*dvipdfm>
11095 \AtBeginShipoutFirst{%
11096   \ifHy@setpagesize
11097     \begingroup
11098       \@ifundefined{stockwidth}{%
11099         \ifdim\paperwidth>\z@
11100           \ifdim\paperheight>\z@
11101             \special{papersize=\the\paperwidth,\the\paperheight}%
11102           \fi
11103         \fi
11104       }{%
11105         \ifdim\stockwidth>\z@
11106           \ifdim\stockheight>\z@
11107             \special{papersize=\the\stockwidth,\the\stockheight}%
11108           \fi
11109         \fi
11110       }%
11111     \endgroup
11112   \fi
11113   \Hy@DisableOption{setpagesize}%
11114 }
11115 </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.

```

11116 <*vtexhtml>
11117 \providecommand*\XR@ext}{htm}
11118 \RequirePackage{vtexhtml}
11119 \newif\if@Localurl
11120 \let\PDF@FinishDoc\ltx@empty
11121 \def\PDF@SetupDoc{%
11122   \ifx\@baseurl\@empty
11123   \else
11124     \special{!direct <base href="\@baseurl">}%
11125   \fi
11126 }
11127 \def\@urltype{url}
11128 \def\hyper@link#1#2#3{%
11129   \Hy@VerboseLinkStart{#1}{#2}%
11130   \leavevmode
11131   \special{!direct <a href=
11132     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11133   #3\Hy@xspace@end
11134   \special{!direct </a>}%
11135 }
11136 \def\hyper@linkurl#1#2{%
11137   \begingroup

```

```

11138 \hyper@chars
11139 \leavevmode
11140 \MathBSuppress=1\relax
11141 \special{!direct <a href=%
11142     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}}%
11143 #1\Hy@xspace@end
11144 \MathBSuppress=0\relax
11145 \special{!direct </a>}}%
11146 \endgroup
11147 }
11148 \def\hyper@linkfile#1#2#3{%
11149 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11150 }
11151 \def\hyper@linkstart#1#2{%
11152 \Hy@VerboseLinkStart{#1}{#2}%
11153 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11154 \@Localurltrue
11155 \special{!direct <a href=\hyper@quote#2\hyper@quote>}}%
11156 \else
11157 \@Localurlfalse
11158 \begingroup
11159 \hyper@chars
11160 \special{!aref \HyperDestNameFilter{#2}}%
11161 \endgroup
11162 \fi
11163 }
11164 \def\hyper@linkend{%
11165 \if@Localurl
11166 \special{!endaref}}%
11167 \else
11168 \special{!direct </a>}}%
11169 \fi
11170 }
11171 \Hy@WrapperDef\hyper@anchorstart#1{%
11172 \Hy@SaveLastskip
11173 \Hy@VerboseAnchor{#1}%
11174 \begingroup
11175 \hyper@chars
11176 \special{!aname #1}%
11177 \special{!direct <a name=%
11178     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11179 \endgroup
11180 \Hy@activeanchortrue
11181 }
11182 \def\hyper@anchorend{%
11183 \special{!direct </a>}}%
11184 \Hy@activeanchorfalse
11185 \Hy@RestoreLastskip
11186 }
11187 \Hy@WrapperDef\hyper@anchor#1{%
11188 \Hy@SaveLastskip
11189 \Hy@VerboseAnchor{#1}%
11190 \begingroup
11191 \let\protect=\string
11192 \hyper@chars
11193 \leavevmode
11194 \special{!aname #1}%

```

```

11195 \special{!direct <a name=%
11196 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11197 \endgroup
11198 \Hy@activeanchortrue
11199 \bgroup\anchor@spot\egroup
11200 \special{!direct </a>}%
11201 \Hy@activeanchorfalse
11202 \Hy@RestoreLastskip
11203 }
11204 \def\@Form[#1]{%
11205 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11206 }
11207 \let\@endForm\ltx@empty
11208 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11209 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11210 }
11211 \def\@TextField[#1]#2{% parameters, label
11212 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11213 }
11214 \def\@CheckBox[#1]#2{% parameters, label
11215 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11216 }
11217 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11218 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11219 }
11220 \def\@PushButton[#1]#2{% parameters, label
11221 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11222 }
11223 \def\@Reset[#1]#2{%
11224 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11225 }
11226 \def\@Submit[#1]#2{%
11227 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11228 }
11229 </vtexhtml>
11230 <*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.

```

11231 \ifx\mediaheight\@undefined
11232 \else
11233 \ifx\mediaheight\relax
11234 \else
11235 \ifHy@setpagesize
11236 \providecommand*\VTeXInitMediaSize{%
11237 \ltx@ifundefined{stockwidth}{%
11238 \ifdim\paperheight>0pt %
11239 \setlength\mediaheight\paperheight
11240 \fi
11241 \ifdim\paperheight>0pt %
11242 \setlength\mediawidth\paperwidth
11243 \fi
11244 }{%
11245 \ifdim\stockheight>0pt %
11246 \setlength\mediaheight\stockheight
11247 \fi

```

```

11248     \ifdim\stockwidth>0pt %
11249         \setlength\mediawidth\stockwidth
11250     \fi
11251 }%
11252 }%
11253 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11254 \fi
11255 \Hy@DisableOption{setpagesize}%
11256 \fi
11257 \fi

Older versions of VTeX require xyz in lower case.

11258 \providecommand*\@pdfview{xyz}
11259 \providecommand*\@pdfborder{0 0 1}
11260 \providecommand*\@pdfborderstyle{}
11261 \let\CurrentBorderColor\@linkbordercolor
11262 \Hy@WrapperDef\hyper@anchor#1{%
11263     \Hy@SaveLastskip
11264     \Hy@VerboseAnchor{#1}%
11265     \begingroup
11266         \let\protect=\string
11267         \hyper@chars
11268         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11269     \endgroup
11270     \Hy@activeanchortrue
11271     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11272     \Hy@activeanchorfalse
11273     \Hy@RestoreLastskip
11274 }
11275 \Hy@WrapperDef\hyper@anchorstart#1{%
11276     \Hy@SaveLastskip
11277     \Hy@VerboseAnchor{#1}%
11278     \begingroup
11279         \hyper@chars
11280         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11281     \endgroup
11282     \Hy@activeanchortrue
11283 }
11284 \def\hyper@anchorend{%
11285     \Hy@activeanchorfalse
11286     \Hy@RestoreLastskip
11287 }
11288 \def\@urltype{url}
11289 \def\Hy@undefinedname{UNDEFINED}
11290 \def\hyper@linkstart#1#2{%
11291     \Hy@VerboseLinkStart{#1}{#2}%
11292     \Hy@pstringdef\Hy@pstringURI{#2}%
11293     \expandafter\Hy@colorlink\csname @#1color\endcsname
11294     \ltx@ifundefined{@#1bordercolor}{%
11295         \let\CurrentBorderColor\relax
11296     }{%
11297         \edef\CurrentBorderColor{%
11298             \csname @#1bordercolor\endcsname
11299         }%
11300     }%
11301     \def\Hy@tempa{#1}%
11302     \ifx\Hy@tempa\@urltype
11303         \special{!%

```

```

11304   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11305       \ifHy@href@ismap
11306       /IsMap true%
11307       \fi
11308       \Hy@href@nextactionraw
11309       >,%
11310   a=<%
11311       \ifHy@pdfa /F 4\fi
11312       \Hy@setpdfborder
11313       \ifx\CurrentBorderColor\relax
11314       \else
11315       /C [\CurrentBorderColor]%
11316       \fi
11317   >%
11318 }%
11319 \else
11320 \protected@edef\Hy@testname{#2}%
11321 \ifx\Hy@testname\@empty
11322 \Hy@Warning{%
11323     Empty destination name,\MessageBreak
11324     using ` \Hy@undefinedname'%
11325 }%
11326 \let\Hy@testname\Hy@undefinedname
11327 \fi
11328 \special{!%
11329   aref \expandafter\HyperDestNameFilter
11330       \expandafter{\Hy@testname};%
11331   a=<%
11332       \ifHy@pdfa /F 4\fi
11333       \Hy@setpdfborder
11334       \ifx\CurrentBorderColor\relax
11335       \else
11336       /C [\CurrentBorderColor]%
11337       \fi
11338   >%
11339 }%
11340 \fi
11341 }
11342 \def\hyper@linkend{%
11343 \special{!endaref}%
11344 \Hy@endcolorlink
11345 }
11346 \def\hyper@linkfile#1#2#3{%
11347 \leavevmode
11348 \def\Hy@pstringF{#2}%
11349 \Hy@CleanupFile\Hy@pstringF
11350 \special{!%
11351   aref <%
11352   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11353   f=\Hy@pstringF>#3;%
11354   a=<%
11355       \ifHy@pdfa /F 4\fi
11356       \Hy@setpdfborder
11357       \ifx\@filebordercolor\relax
11358       \else
11359       /C [\@filebordercolor]%
11360       \fi

```

```

11361 >%
11362 }%
11363 \Hy@colorlink\@filecolor
11364 #1\Hy@xspace@end
11365 \Hy@endcolorlink
11366 \special{!endaref}%
11367 }
11368 \def\hyper@linkurl#1#2{%
11369 \begingroup
11370 \Hy@pstringdef\Hy@pstringURI{#2}%
11371 \hyper@chars
11372 \leavevmode
11373 \special{!%
11374   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11375   \ifHy@href@ismap
11376     /IsMap true%
11377   \fi
11378   \Hy@href@nextactionraw
11379   >;%
11380   a=<%
11381     \ifHy@pdfa /F 4\fi
11382     \Hy@setpdfborder
11383     \ifx\@urlbordercolor\relax
11384     \else
11385       /C [\@urlbordercolor]%
11386     \fi
11387   >%
11388   }%
11389   \Hy@colorlink\@urlcolor
11390   #1\Hy@xspace@end
11391   \Hy@endcolorlink
11392   \special{!endaref}%
11393 \endgroup
11394 }
11395 \def\hyper@link#1#2#3{%
11396 \Hy@VerboseLinkStart{#1}{#2}%
11397 \ltx@ifundefined{#@#1bordercolor}{%
11398 \let\CurrentBorderColor\relax
11399 }{%
11400 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11401 }%
11402 \leavevmode
11403 \protected@edef\Hy@testname{#2}%
11404 \ifx\Hy@testname\@empty
11405 \Hy@Warning{%
11406   Empty destination name,\MessageBreak
11407   using ``\Hy@undefinedname'%
11408 }%
11409 \let\Hy@testname\Hy@undefinedname
11410 \fi
11411 \special{!%
11412   aref \expandafter\HyperDestNameFilter
11413     \expandafter{\Hy@testname};%
11414   a=<%
11415     \ifHy@pdfa /F 4\fi
11416     \Hy@setpdfborder
11417     \ifx\CurrentBorderColor\relax

```



```

11418 \else
11419 /C [\CurrentBorderColor]%
11420 \fi
11421 >%
11422 }%
11423 \expandafter
11424 \Hy@colorlink\csname @#1color\endcsname
11425 #3\Hy@xspace@end
11426 \Hy@endcolorlink
11427 \special{!endaref}%
11428 }
11429 \def\hyper@image#1#2{%
11430 \hyper@linkurl{#2}{#1}%
11431 }
11432 \def\@hyper@launch run:#1\#2#3{%
11433 \Hy@pstringdef\Hy@pstringF{#1}%
11434 \Hy@pstringdef\Hy@pstringP{#3}%
11435 \leavevmode
11436 \special{!aref %
11437 <u=%
11438 /Type/Action%
11439 /S/Launch%
11440 /F(\Hy@pstringF)%
11441 \Hy@SetNewWindow
11442 \ifx\#3\%
11443 \else
11444 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11445 \fi
11446 \Hy@href@nextactionraw
11447 >,%
11448 a=<%
11449 \ifHy@pdfa /F 4\fi
11450 \Hy@setpdfborder
11451 \ifx\@runbordercolor\relax
11452 \else
11453 /C[\@runbordercolor]%
11454 \fi
11455 >%
11456 }%
11457 \Hy@colorlink\@runcolor
11458 #2\Hy@xspace@end
11459 \Hy@endcolorlink
11460 \special{!endaref}%
11461 }
11462 \def\Acrobatmenu#1#2{%
11463 \EdefEscapeName\Hy@temp@menu{#1}%
11464 \Hy@Acrobatmenu{#1}{#2}{%
11465 \special{!%
11466 aref <u=/S /Named /N /\Hy@temp@menu>,%
11467 a=<%
11468 \ifHy@pdfa /F 4\fi
11469 \Hy@setpdfborder
11470 \ifx\@menubordercolor\relax
11471 \else
11472 /C[\@menubordercolor]%
11473 \fi
11474 >%

```

```

11475 }%
11476 \Hy@colorlink\@menucolor
11477 #2\Hy@xspace@end
11478 \Hy@endcolorlink
11479 \special{!endaref}%
11480 }%
11481 }

```

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

The code below makes sense for \TeX 7.02 or later.

Please never use $\backslash@ifundefined{\text{\TeX}version}\{..\}\{..\}$ *globally*.

```

11482 \ifnum\Hy@VTeXversion<702 %
11483 \else
11484 \def\hyper@pagetransition{%
11485 \ifx\@pdfpagetransition\relax
11486 \else
11487 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

11488 \else
11489 \hvtex@parse@trans\@pdfpagetransition
11490 \fi
11491 \fi
11492 }%

```

I have to write an “honest” parser to convert raw PDF code into \TeX $\backslash\text{special}$. (AVK)

Syntax of \TeX $\backslash\text{special}\{!\text{trans } \langle\text{transition_effect}\rangle\}$:

```

<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:

```

11493 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11494 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11495 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11496 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11497 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11498 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11499 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11500 \def\hvtex@par@dimension{/Dm}%
11501 \def\hvtex@par@direction{/Di}%
11502 \def\hvtex@par@duration{/D}%
11503 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```
11504 \def\hvtex@gettoken{%
11505   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11506 }%
```

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

```
11507 \def\hvtex@gettoken@#1 #2\@nil{%
11508   \edef\hvtex@token{#1}%
11509   \edef\hvtex@buffer{#2}%
11510 }%
11511 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11512 \let\hvtex@trans@code\@empty
11513 \let\hvtex@param@dimension\@empty
11514 \let\hvtex@param@direction\@empty
11515 \let\hvtex@param@duration\@empty
11516 \let\hvtex@param@motion\@empty
11517 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11518 \hvtex@gettoken
11519 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11520   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11521   \else
11522     \hvtex@gettoken
11523   \fi
11524 \fi
11525 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11526 \hvtex@trans@params
11527 }%
```

Reentrant macro to parse optional parameters.

```
11528 \def\hvtex@trans@params{%
11529   \ifx\hvtex@buffer\@empty
11530   \else
11531     \hvtex@gettoken
11532     \let\hvtex@trans@par\hvtex@token
11533     \ifx\hvtex@buffer\@empty
11534     \else
11535       \hvtex@gettoken
11536       \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_{TEX} special takes it in milliseconds.

```
11537       \let\hvtex@param@duration\hvtex@token
11538     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11539       \expandafter\edef\expandafter\hvtex@param@motion
11540       \expandafter{\expandafter\@gobble\hvtex@token}%
11541     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11542       \expandafter\edef\expandafter\hvtex@param@dimension
11543       \expandafter{\expandafter\@gobble\hvtex@token}%
11544     \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).

```

11545     \let\hvtex@param@direction\hvtex@token
11546     \fi\fi\fi\fi
11547     \fi
11548     \fi
11549     \ifx\hvtex@buffer\@empty
11550     \let\next\hvtex@produce@trans
11551     \else
11552     \let\next\hvtex@trans@params
11553     \fi
11554     \next
11555 }%
```

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

```

11556 \def\hvtex@produce@trans{%
11557 \let\vtex@trans@special\@empty
11558 \if S\hvtex@trans@code
11559 \edef\vtex@trans@special{\hvtex@trans@code
11560 \hvtex@param@dimension\hvtex@param@motion}%
11561 \else\if B\hvtex@trans@code
11562 \edef\vtex@trans@special{%
11563 \hvtex@trans@code\hvtex@param@dimension
11564 }%
11565 \else\if X\hvtex@trans@code
11566 \edef\vtex@trans@special{%
11567 \hvtex@trans@code\hvtex@param@motion
11568 }%
11569 \else\if W\hvtex@trans@code
11570 \edef\vtex@trans@special{%
11571 \hvtex@trans@code\hvtex@param@direction
11572 }%
11573 \else\if D\hvtex@trans@code
11574 \let\vtex@trans@special\hvtex@trans@code
11575 \else\if R\hvtex@trans@code
11576 \let\vtex@trans@special\hvtex@trans@code
11577 \else\if G\hvtex@trans@code
11578 \edef\vtex@trans@special{%
11579 \hvtex@trans@code\hvtex@param@direction
11580 }%
11581 \fi\fi\fi\fi\fi\fi
11582 \ifx\vtex@trans@special\@empty
11583 \else
11584 \ifx\hvtex@param@duration\@empty
11585 \else
11586 \setlength{\dimen@}{\hvtex@param@duration\p}%
```

I'm not guilty of possible overflow.

```

11587 \multiply\dimen@\@m
11588 \edef\vtex@trans@special{%
11589 \vtex@trans@special,\strip@pt\dimen@
11590 }%
11591 \fi
```

And all the mess is just for this.

```

11592 \special{!trans \vtex@trans@special}%
11593 \fi
```

```

11594 }%
11595 \def\hyper@pageduration{%
11596 \ifx\@pdfpageduration\relax
11597 \else
11598 \ifx\@pdfpageduration\@empty
11599 \special{!duration-}%
11600 \else
11601 \special{!duration \@pdfpageduration}%
11602 \fi
11603 \fi
11604 }%
11605 \def\hyper@pagehidden{%
11606 \ifHy@useHidKey
11607 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11608 \fi
11609 }%
11610 \g@addto@macro\Hy@EveryPageBoxHook{%
11611 \hyper@pagetransition
11612 \hyper@pageduration
11613 \hyper@pagehidden
11614 }%
11615 \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

```

11616 \ifx\@pdfproducer\relax
11617 \def\@pdfproducer{VTeX}%
11618 \ifnum\Hy@VTeXversion>\z@
11619 \count@\VTeXversion
11620 \divide\count@ 100 %
11621 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11622 \multiply\count@ -100 %
11623 \advance\count@\VTeXversion
11624 \edef\@pdfproducer{%
11625 \@pdfproducer
11626 .\ifnum\count@<10 0\fi\the\count@
11627 \ifx\VTeXOS\@undefined\else
11628 \ifnum\VTeXOS>0 %
11629 \ifnum\VTeXOS<6 %
11630 \space(
11631 \ifcase\VTeXOS
11632 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11633 \fi
11634 )%
11635 \fi
11636 \fi
11637 \fi
11638 ,\space
11639 \ifnum\OpMode=\@ne PDF\else PS\fi

```

```

11640 \space backend%
11641 \ifx\gexmode\@undefined\else
11642 \ifnum\gexmode>\z@\space with GeX\fi
11643 \fi
11644 }%
11645 \fi
11646 \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).

```

11647 \def\PDF@SetupDoc{%
11648 \ifx\@pdfpagescrop\@empty
11649 \else
11650 \special{!pdfinfo b=<\@pdfpagescrop>}%
11651 \fi
11652 \ifx\@pdfstartpage\@empty
11653 \else
11654 \ifx\@pdfstartview\@empty
11655 \else
11656 \special{!onopen Page\@pdfstartpage}%
11657 \fi
11658 \fi
11659 \special{!pdfinfo p=</\@pdfpagemode>}%
11660 \ifx\@baseurl\@empty
11661 \else
11662 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11663 \fi
11664 \special{!pdfinfo v=<<<%
11665 \ifHy@pdftoolbar\else /HideToolbar true\fi
11666 \ifHy@pdfmenubar\else /HideMenubar true\fi
11667 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11668 \ifHy@pdffitwindow /FitWindow true\fi
11669 \ifHy@pdfcenterwindow /CenterWindow true\fi
11670 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11671 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11672 \Hy@UseNameKey{Direction}\@pdfdirection
11673 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11674 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11675 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11676 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11677 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11678 \Hy@UseNameKey{Duplex}\@pdfduplex
11679 \ifx\@pdfpicktraybypdfsize\@empty
11680 \else
11681 /PickTrayByPDFSize \@pdfpicktraybypdfsize

```

```

11682 \fi
11683 \ifx\@pdfprintpagerange\@empty
11684 \else
11685 /PrintPageRange[\@pdfprintpagerange]%
11686 \fi
11687 \ifx\@pdfnumcopies\@empty
11688 \else
11689 /NumCopies \@pdfnumcopies
11690 \fi
11691 >>>}%
11692 \ifx\@pdfpagelayout\@empty
11693 \else
11694 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11695 \fi
11696 }%
11697 \HyInfo@AddonUnsupportedtrue
11698 \define@key{Hyp}{pdfcreationdate}{%
11699 \Hy@Warning{%
11700 VTeX does not support pdfcreationdate.\MessageBreak
11701 Therefore its setting is ignored%
11702 }%
11703 }
11704 \define@key{Hyp}{pdfmoddate}{%
11705 \Hy@Warning{%
11706 VTeX does not support pdfmoddate.\MessageBreak
11707 Therefore its setting is ignored%
11708 }%
11709 }
11710 \def\PDF@FinishDoc{%
11711 \Hy@UseMaketitleInfos
11712 \HyInfo@TrappedUnsupported
11713 \special{!pdfinfo a=<\@pdfauthor>}%
11714 \special{!pdfinfo t=<\@pdftitle>}%
11715 \special{!pdfinfo s=<\@pdfsubject>}%
11716 \special{!pdfinfo c=<\@pdfcreator>}%
11717 \ifx\@pdfproducer\relax
11718 \else
11719 \special{!pdfinfo r=<\@pdfproducer>}%
11720 \fi
11721 \special{!pdfinfo k=<\@pdfkeywords>}%
11722 \Hy@DisableOption{pdfauthor}%
11723 \Hy@DisableOption{pdftitle}%
11724 \Hy@DisableOption{pdfsubject}%
11725 \Hy@DisableOption{pdfcreator}%
11726 \Hy@DisableOption{pdfcreationdate}%
11727 \Hy@DisableOption{pdfmoddate}%
11728 \Hy@DisableOption{pdfproducer}%
11729 \Hy@DisableOption{pdfkeywords}%
11730 \Hy@DisableOption{pdftrapped}%
11731 \Hy@DisableOption{pdfinfo}%
11732 }
11733 </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.

```

11734 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11735 <package>\providecommand*\Hy@DistillerDestFix{}
11736 <*pdfmark | dviwindo>
11737 \def\Hy@DistillerDestFix{%
11738   \begingroup
11739     \let\x\literalps@out

```

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

```

11740   \ifnum \@ifundefined{OpMode}{0}{%
11741     \@ifundefined{gexmode}{0}{%
11742       \ifnum\gexmode>0 \OpMode\else 0\fi
11743     }>1 %
11744   \def\x##1{%
11745     \immediate\special{!=##1}%
11746   }%
11747 \fi
11748 \x{%
11749   /product where{%
11750     pop %
11751     product(Distiller)search{%
11752       pop pop pop %
11753       version(.)search{%
11754         exch pop exch pop%
11755         (3011)eq{%
11756           gsave %
11757           newpath 0 0 moveto closepath clip%
11758           /Courier findfont 10 scalefont setfont %
11759           72 72 moveto(.)show %
11760           grestore%
11761         }if%
11762       }{pop}ifelse%
11763     }{pop}ifelse%
11764   }if%
11765 }%
11766 \endgroup
11767 }
11768 </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:

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

```

11769 \*pdfmark>
11770 \Hy@breaklinks@unsupported
11771 \def\HyPat@ObjRef{%
11772   \{[~{}]+\}%
11773 }
11774 \Hy@WrapperDef\hyper@anchor#1{%
11775   \Hy@SaveLastskip
11776   \Hy@VerboseAnchor{#1}%
11777   \begingroup
11778     \pdfmark[\anchor@spot]{%
11779       pdfmark=/DEST,%
11780       linktype=anchor,%
11781       View=/\@pdfview \@pdfviewparams,%
11782       DestAnchor={#1}%
11783     }%
11784   \endgroup
11785   \Hy@RestoreLastskip
11786 }
11787 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11788 \Hy@WrapperDef\hyper@anchorstart#1{%
11789   \Hy@SaveLastskip
11790   \Hy@VerboseAnchor{#1}%
11791   \literalps@out{H.S}%
11792   \Hy@AllowHyphens
11793   \xdef\hyper@currentanchor{#1}%
11794   \Hy@activeanchortrue
11795 }
11796 \def\hyper@anchorend{%
11797   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11798   \pdfmark{%
11799     pdfmark=/DEST,%
11800     linktype=anchor,%
11801     View=/\@pdfview \@pdfviewparams,%
11802     DestAnchor=\hyper@currentanchor,%
11803   }%
11804   \Hy@activeanchorfalse
11805   \Hy@RestoreLastskip
11806 }
11807 \def\hyper@linkstart#1#2{%
11808   \Hy@VerboseLinkStart{#1}{#2}%
11809   \ifHy@breaklinks
11810   \else
11811     \leavevmode
11812     \ifmmode
11813       \def\Hy@LinkMath{$}%
11814     \else
11815       \let\Hy@LinkMath\ltx@empty
11816     \fi
11817     \Hy@SaveSpaceFactor
11818     \hbox\bgroup
11819     \Hy@RestoreSpaceFactor
11820     \Hy@LinkMath

```

```

11821 \fi
11822 \expandafter\Hy@colorlink\csname @#1color\endcsname
11823 \literalps@out{H.S}%
11824 \Hy@AllowHyphens
11825 \xdef\hyper@currentanchor{#2}%
11826 \gdef\hyper@currentlinktype{#1}%
11827 }
11828 \def\hyper@linkend{%
11829 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11830 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11831 \let\Hy@tempcolor\relax
11832 }{%
11833 \edef\Hy@tempcolor{%
11834 \csname @\hyper@currentlinktype bordercolor\endcsname
11835 }%
11836 }%
11837 \pdfmark{%
11838 pdfmark=/ANN,%
11839 linktype=link,%
11840 Subtype=/Link,%
11841 PDFAFlags=4,%
11842 Dest=\hyper@currentanchor,%
11843 AcroHighlight=\@pdfhighlight,%
11844 Border=\@pdfborder,%
11845 BorderStyle=\@pdfborderstyle,%
11846 Color=\Hy@tempcolor,%
11847 Raw=H.B%
11848 }%
11849 \Hy@endcolorlink
11850 \ifHy@breaklinks
11851 \else
11852 \Hy@LinkMath
11853 \Hy@SaveSpaceFactor
11854 \egroup
11855 \Hy@RestoreSpaceFactor
11856 \fi
11857 }

```

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.

```

11858 \begingroup
11859 \catcode`P=12 %
11860 \catcode`T=12 %
11861 \lowercase{\endgroup
11862 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11863 }
11864 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11865 \def\hyper@pagetransition{%
11866 \ifx\@pdfpagetransition\relax
11867 \else
11868 \ifx\@pdfpagetransition\@empty
11869 % 1. Does an old entry have to be deleted?
11870 % 2. If 1=yes, how to delete?
11871 \else

```

```

11872 \pdfmark{%
11873 pdfmark=/PUT,%
11874 Raw={%
11875 \string{ThisPage\string}%
11876 <</Trans << /S /\@pdfpagetransition\space >> >>%
11877 }%
11878 }%
11879 \fi
11880 \fi
11881 }

```

\hyper@pageduration

```

11882 \def\hyper@pageduration{%
11883 \ifx\@pdfpageduration\relax
11884 \else
11885 \ifx\@pdfpageduration\@empty
11886 % 1. Does an old entry have to be deleted?
11887 % 2. If 1=yes, how to delete?
11888 \else
11889 \pdfmark{%
11890 pdfmark=/PUT,%
11891 Raw={%
11892 \string{ThisPage\string}%
11893 <</Dur \@pdfpageduration>>%
11894 }%
11895 }%
11896 \fi
11897 \fi
11898 }

```

\hyper@pagehidden

```

11899 \def\hyper@pagehidden{%
11900 \ifHy@useHidKey
11901 \pdfmark{%
11902 pdfmark=/PUT,%
11903 Raw={%
11904 \string{ThisPage\string}%
11905 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11906 }%
11907 }%
11908 \fi
11909 }

11910 \g@addto@macro\Hy@EveryPageBoxHook{%
11911 \hyper@pagetransition
11912 \hyper@pageduration
11913 \hyper@pagehidden
11914 }

11915 \def\hyper@image#1#2{%
11916 \hyper@linkurl{#2}{#1}%
11917 }
11918 \def\Hy@undefinedname{UNDEFINED}
11919 \def\hyper@link#1#2#3{%
11920 \Hy@VerboseLinkStart{#1}{#2}%
11921 \ltx@ifundefined{@#1bordercolor}{%
11922 \let\Hy@tempcolor\relax
11923 }{%

```

```

11924 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11925 }%
11926 \begingroup
11927 \protected@edef\Hy@testname{#2}%
11928 \ifx\Hy@testname\@empty
11929 \Hy@Warning{%
11930 Empty destination name,\MessageBreak
11931 using ``\Hy@undefinedname'%
11932 }%
11933 \let\Hy@testname\Hy@undefinedname
11934 \fi
11935 \pdfmark[{#3}]{%
11936 Color=\Hy@tempcolor,%
11937 linktype={#1},%
11938 AcroHighlight=\@pdfhighlight,%
11939 Border=\@pdfborder,%
11940 BorderStyle=\@pdfborderstyle,%
11941 pdfmark=/ANN,%
11942 Subtype=/Link,%
11943 PDFAFlags=4,%
11944 Dest=\Hy@testname
11945 }%
11946 \endgroup
11947 }
11948 \newtoks\pdf@docset
11949 \def\PDF@FinishDoc{%
11950 \Hy@UseMaketitleInfos
11951 \Hy@Info@GenerateAddons
11952 \let\Hy@temp\@empty
11953 \ifx\@pdfcreationdate\@empty
11954 \else
11955 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11956 \fi
11957 \ifx\@pdfmoddate\@empty
11958 \else
11959 \expandafter\def\expandafter\Hy@temp\expandafter{%
11960 \Hy@temp
11961 ModDate=\@pdfmoddate,%
11962 }%
11963 \fi
11964 \ifx\@pdfproducer\relax
11965 \else
11966 \expandafter\def\expandafter\Hy@temp\expandafter{%
11967 \Hy@temp
11968 Producer=\@pdfproducer,%
11969 }%
11970 \fi
11971 \expandafter
11972 \pdfmark\expandafter{%
11973 \Hy@temp
11974 pdfmark=/DOCINFO,%
11975 Title=\@pdftitle,%
11976 Subject=\@pdfsubject,%
11977 Creator=\@pdfcreator,%
11978 Author=\@pdfauthor,%
11979 Keywords=\@pdfkeywords,%
11980 Trapped=\@pdftrapped

```

```

11981 }%
11982 \ifx\HyInfo@Addons\@empty
11983 \else
11984 \pdfmark{%
11985 pdfmark=/DOCINFO,%
11986 Raw={\HyInfo@Addons}%
11987 }%
11988 \fi
11989 \Hy@DisableOption{pdfauthor}%
11990 \Hy@DisableOption{pdftitle}%
11991 \Hy@DisableOption{pdfsubject}%
11992 \Hy@DisableOption{pdfcreator}%
11993 \Hy@DisableOption{pdfcreationdate}%
11994 \Hy@DisableOption{pdfmoddate}%
11995 \Hy@DisableOption{pdfproducer}%
11996 \Hy@DisableOption{pdfkeywords}%
11997 \Hy@DisableOption{pdftrapped}%
11998 \Hy@DisableOption{pdfinfo}%
11999 }
12000 \def\PDF@SetupDoc{%
12001 \def\Hy@temp{}%
12002 \ifx\@pdfstartpage\@empty
12003 \else
12004 \ifx\@pdfstartview\@empty
12005 \else
12006 \edef\Hy@temp{%
12007 ,Page=\@pdfstartpage
12008 ,View=\@pdfstartview
12009 }%
12010 \fi
12011 \fi
12012 \edef\Hy@temp{%
12013 \noexpand\pdfmark{%
12014 pdfmark=/DOCVIEW,%
12015 PageMode=/\@pdfpagemode
12016 \Hy@temp
12017 }%
12018 }%
12019 \Hy@temp
12020 \ifx\@pdfpagescrop\@empty
12021 \else
12022 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12023 \fi
12024 \edef\Hy@temp{%
12025 \ifHy@pdftoolbar\else /HideToolbar true\fi
12026 \ifHy@pdfmenubar\else /HideMenubar true\fi
12027 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12028 \ifHy@pdfwindow /FitWindow true\fi
12029 \ifHy@pdfcenterwindow /CenterWindow true\fi
12030 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12031 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12032 \Hy@UseNameKey{Direction}\@pdfdirection
12033 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12034 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12035 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12036 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12037 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling

```

```

12038 \Hy@UseNameKey{Duplex}\@pdfduplex
12039 \ifx\@pdfpicktraybypdfsize\@empty
12040 \else
12041 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12042 \fi
12043 \ifx\@pdfprintpagerange\@empty
12044 \else
12045 /PrintPageRange[\@pdfprintpagerange]%
12046 \fi
12047 \ifx\@pdfnumcopies\@empty
12048 \else
12049 /NumCopies \@pdfnumcopies
12050 \fi
12051 }%
12052 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12053 \pdfmark{%
12054 pdfmark=/PUT,%
12055 Raw={%
12056 \string{Catalog\string}<<%
12057 \ifx\Hy@temp\@empty
12058 \else
12059 /ViewerPreferences<<\Hy@temp>>%
12060 \fi
12061 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12062 \ifx\@pdflang\relax
12063 \else
12064 /Lang(\@pdflang)%
12065 \fi
12066 \ifx\@baseurl\@empty
12067 \else
12068 /URI<</Base(\Hy@pstringB)>>%
12069 \fi
12070 >>%
12071 }%
12072 }%
12073 }
12074 </pdfmark>
12075 <*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.

```

12076 \newif\ifHy@pdfmarkerror
12077 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12078 \def\pdfmark@[#1]#2{%
12079 \Hy@pdfmarkerrorfalse
12080 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12081 \@processme
12082 \let\pdf@type\relax
12083 \let\pdf@objdef\ltx@empty
12084 \kvsetkeys{PDF}{#2}%
12085 \ifHy@pdfmarkerror
12086 \else
12087 \ifx\pdf@type\relax

```

```

12088 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12089 \ifx\#1\%
12090 \else
12091 \pdf@rect{#1}%
12092 \fi
12093 \else
12094 \ifx\#1\%
12095 \literalps@out{%
12096 [%
12097 \ifx\pdf@objdef\ltx@empty
12098 \else
12099 /_objdef\string{\pdf@objdef\string}%
12100 \fi
12101 \the\pdf@toks\space\pdf@type\space pdfmark%
12102 }%
12103 \else
12104 \ltx@ifundefined{@\pdf@linktype color}{%
12105 \Hy@colorlink\@linkcolor
12106 }{%
12107 \expandafter\Hy@colorlink
12108 \csname @\pdf@linktype color\endcsname
12109 }%
12110 \pdf@rect{#1}%
12111 \literalps@out{%
12112 [%
12113 \ifx\pdf@objdef\ltx@empty
12114 \else
12115 /_objdef\string{\pdf@objdef\string}%
12116 \fi
12117 \the\pdf@toks\space\pdf@type\space pdfmark%
12118 }%
12119 \Hy@endcolorlink
12120 \fi
12121 \fi
12122 \fi
12123 }

```

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}

```

```

12124 \newsavebox{\pdf@box}
12125 \providecommand*\Hy@setouterhbox{\sbox}
12126 \providecommand*\Hy@breaklinksunhbox{\unhbox}
12127 \def\Hy@DEST{/DEST}
12128 \def\pdf@rect#1{%
12129 \begingroup
12130 \chardef\x=1 %
12131 \def\Hy@temp{#1}%

```

```

12132 \ifx\Hy@temp\ltx@empty
12133 \chardef\x=0 %
12134 \else
12135 \def\y{\anchor@spot}%
12136 \ifx\Hy@temp\y
12137 \def\y{\relax}%
12138 \ifx\anchor@spot\y
12139 \chardef\x=0 %
12140 \fi
12141 \fi
12142 \fi
12143 \expandafter\endgroup
12144 \ifcase\x
12145 \literalps@out{H.S}%
12146 \literalps@out{H.R}%
12147 \else
12148 \leavevmode
12149 \Hy@SaveSpaceFactor
12150 \ifmmode
12151 \def\Hy@LinkMath{$}%
12152 \else
12153 \let\Hy@LinkMath\ltx@empty
12154 \fi
12155 \ifHy@breaklinks
12156 \Hy@setouterhbox\pdf@box{%
12157 \Hy@RestoreSpaceFactor
12158 \Hy@LinkMath
12159 \Hy@AllowHyphens#1\Hy@xspace@end
12160 \Hy@LinkMath
12161 \Hy@SaveSpaceFactor
12162 }%
12163 \else
12164 \sbox\pdf@box{%
12165 \Hy@RestoreSpaceFactor
12166 \Hy@LinkMath
12167 #1\Hy@xspace@end
12168 \Hy@LinkMath
12169 \Hy@SaveSpaceFactor
12170 }%
12171 \fi
12172 \dimen@ht\pdf@box
12173 \ifdim\dp\pdf@box=z@
12174 \literalps@out{H.S}%
12175 \else
12176 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12177 \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...).

```

12178 \ifHy@breaklinks
12179 \ifhmode
12180 \Hy@breaklinkshbox\pdf@box
12181 \else
12182 \box\pdf@box
12183 \fi
12184 \else
12185 \expandafter\box\pdf@box
12186 \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

12187 \ifdim\dimen@=\z@
12188 \literalps@out{H.R}%
12189 \else
12190 \raise\dimen@\hbox{\literalps@out{H.R}}%
12191 \fi
12192 \Hy@RestoreSpaceFactor
12193 \fi
12194 \ifx\pdf@type\Hy@DEST
12195 \else
12196 \pdf@addtoksx{H.B}%
12197 \fi
12198 }

```

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.

```

12199 \newtoks\pdf@toks
12200 \newtoks\pdf@defaulttoks
12201 \pdf@defaulttoks={}
12202 \def\pdf@addtoks#1#2{%
12203 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12204 \@processme
12205 }
12206 \def\pdf@addtoksx#1{%
12207 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12208 \@processme
12209 }
12210 \def\PDFdefaults#1{%
12211 \pdf@defaulttoks={#1}%
12212 }

```

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

```

12213 % what is the type of pdfmark?
12214 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12215 % what is the link type?
12216 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12217 \def\pdf@linktype{link}
12218 % named object?
12219 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12220 \let\pdf@objdef\ltx@empty
12221 % parameter is a stream of PDF
12222 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12223 % parameter is a name
12224 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12225 % parameter is a array
12226 \define@key{PDF}{Border}{%
12227 \edef\Hy@temp{#1}%
12228 \ifx\Hy@temp\@empty
12229 \else
12230 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12231 \fi
12232 }

```

```

12233 \let\Hy@BorderArrayPatch\@empty
12234 % parameter is a dictionary
12235 \define@key{PDF}{BorderStyle}{%
12236   \edef\Hy@temp{#1}%
12237   \ifx\Hy@temp\@empty
12238     \else
12239     \pdf@addtoks{<<#1>>}{BS}%
12240   \fi
12241 }
12242 % parameter is a array
12243 \define@key{PDF}{Color}{%
12244   \ifx\relax#1\relax
12245     \else
12246     \pdf@addtoks{[#1]}{Color}% hash-ok
12247   \fi
12248 }
12249 % parameter is a string
12250 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12251 % parameter is a integer
12252 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12253 % parameter is a array
12254 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12255 % parameter is a string
12256 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12257 % parameter is a string or file
12258 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12259 % parameter is a destination
12260 \define@key{PDF}{Dest}{%
12261   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12262   \ifx\Hy@pstringDest\@empty
12263     \Hy@pdfmarkerrortrue
12264     \Hy@Warning{Destination with empty name ignored}%
12265   \else
12266     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12267   \fi
12268 }
12269 \define@key{PDF}{DestAnchor}{%
12270   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12271   \ifx\Hy@pstringDest\@empty
12272     \Hy@pdfmarkerrortrue
12273     \Hy@Warning{Destination with empty name ignored}%
12274   \else
12275     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12276   \fi
12277 }
12278 % parameter is a string
12279 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12280 % parameter is a string
12281 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12282 % parameter is a int
12283 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12284 \define@key{PDF}{PDFAFlags}{%
12285   \ifHy@pdfa
12286     \pdf@addtoks{#1}{F}%
12287   \fi
12288 }
12289 % parameter is a name

```

```

12290 \define@key{PDF}{AcroHighlight}{%
12291   \begingroup
12292     \edef\x{#1}%
12293     \expandafter\endgroup\ifx\x\@empty
12294     \else
12295       \pdf@addtoks{#1}{H}%
12296     \fi
12297 }
12298 % parameter is a string
12299 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12300 % parameter is a string
12301 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12302 % parameter is a string
12303 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12304 % parameter is a string
12305 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12306 % parameter is a Boolean
12307 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12308 % parameter is a integer or name
12309 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12310 % parameter is a name
12311 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12312 % parameter is a string
12313 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12314 % parameter is an array
12315 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12316 % parameter is a integer
12317 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12318 % parameter is a name
12319 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12320 % parameter is a string
12321 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12322 % parameter is a string
12323 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12324 % parameter is a string
12325 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
12326 % parameter is an array
12327 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12328 % parameter is a string
12329 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12330 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12331 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12332 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12333 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12334 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12335 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
12336 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12337 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12338 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12339 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12340 \define@key{PDF}{Trapped}{%
12341   \edef\Hy@temp{#1}%
12342   \ifx\Hy@temp\@empty
12343   \else
12344     \pdf@addtoks{/#1}{Trapped}%
12345   \fi

```

```

12346 }
12347
12348 </pdfmarkbase>
12349 <*pdfmark>
12350 \def\Acrobatmenu#1#2{%
12351   \EdefEscapeName\Hy@temp@menu{#1}%
12352   \Hy@Acrobatmenu{#1}{#2}{%
12353     \pdfmark[{#2}]{%
12354       linktype=menu,%
12355       pdfmark=/ANN,%
12356       AcroHighlight=\@pdfhighlight,%
12357       Border=\@pdfborder,%
12358       BorderStyle=\@pdfborderstyle,%
12359       Color=\@menubordercolor,%
12360       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12361       Subtype=/Link,%
12362       PDFAFlags=4%
12363     }%
12364   }%
12365 }

```

And now for some useful examples:

```

12366 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12367 \def\PDFNextPage@[#1]#2{%
12368   \pdfmark[{#2}]{%
12369     #1,%
12370     Border=\@pdfborder,%
12371     BorderStyle=\@pdfborderstyle,%
12372     Color=.2 .1 .5,%
12373     pdfmark=/ANN,%
12374     Subtype=/Link,%
12375     PDFAFlags=4,%
12376     Page=/Next%
12377   }%
12378 }
12379 \def\PDFPreviousPage{%
12380   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12381 }
12382 \def\PDFPreviousPage@[#1]#2{%
12383   \pdfmark[{#2}]{%
12384     #1,%
12385     Border=\@pdfborder,%
12386     BorderStyle=\@pdfborderstyle,%
12387     Color=.4 .4 .1,%
12388     pdfmark=/ANN,%
12389     Subtype=/Link,%
12390     PDFAFlags=4,%
12391     Page=/Prev%
12392   }%
12393 }
12394 \def\PDFOpen#1{%
12395   \pdfmark{#1,pdfmark=/DOCVIEW}%
12396 }

```

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

```

12397 \def\hyper@linkurl#1#2{%
12398   \begingroup
12399     \Hy@pstringdef\Hy@pstringURI{#2}%

```

```

12400 \hyper@chars
12401 \leavevmode
12402 \pdfmark[{#1}]{%
12403   pdfmark=/ANN,%
12404   linktype=url,%
12405   AcroHighlight=\@pdfhighlight,%
12406   Border=\@pdfborder,%
12407   BorderStyle=\@pdfborderstyle,%
12408   Color=\@urlbordercolor,%
12409   Action={<<%
12410     /Subtype/URI%
12411     /URI(\Hy@pstringURI)%
12412     \ifHy@href@ismap
12413       /IsMap true%
12414     \fi
12415   >>},%
12416   Subtype=/Link,%
12417   PDFAFlags=4%
12418 }%
12419 \endgroup
12420 }
12421 \def\hyper@linkfile#1#2#3{%
12422 \begingroup
12423   \def\Hy@pstringF{#2}%
12424   \Hy@CleanupFile\Hy@pstringF
12425   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12426   \Hy@pstringdef\Hy@pstringD{#3}%
12427   \Hy@MakeRemoteAction
12428   \leavevmode
12429   \pdfmark[{#1}]{%
12430     pdfmark=/ANN,%
12431     Subtype=/Link,%
12432     PDFAFlags=4,%
12433     AcroHighlight=\@pdfhighlight,%
12434     Border=\@pdfborder,%
12435     BorderStyle=\@pdfborderstyle,%
12436     linktype=file,%
12437     Color=\@filebordercolor,%
12438     Action={%
12439       <<%
12440         /S/GoToR%
12441         \Hy@SetNewWindow
12442         /F(\Hy@pstringF)%
12443         /D%
12444         \ifx\#3\%
12445           [\Hy@href@page\@pdfremotestartview]%
12446         \else
12447           (\Hy@pstringD)cvn%
12448         \fi
12449         \Hy@href@nextactionraw
12450       >>%
12451     }%
12452   }%
12453 \endgroup
12454 }
12455 \def\@hyper@launch run:#1\#2#3{%
12456 \begingroup

```

```

12457 \Hy@pstringdef\Hy@pstringF{#1}%
12458 \Hy@pstringdef\Hy@pstringP{#3}%
12459 \leavevmode
12460 \pdfmark[{#2}]{%
12461   pdfmark=/ANN,%
12462   Subtype=/Link,%
12463   PDFAFlags=4,%
12464   AcroHighlight=\@pdfhighlight,%
12465   Border=\@pdfborder,%
12466   BorderStyle=\@pdfborderstyle,%
12467   linktype=run,%
12468   Color=\@runbordercolor,%
12469   Action={%
12470     <<%
12471     /S/Launch%
12472     \Hy@SetNewWindow
12473     /F(\Hy@pstringF)%
12474     \ifx\#3\%
12475     \else
12476     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12477     \fi
12478     \Hy@href@nextactionraw
12479     >>%
12480   }%
12481 }%
12482 \endgroup
12483 }
12484 \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.

```

12485 (*dvips)
12486 \providecommand*\XR@ext}{pdf}
12487 \let\Hy@raisedlink\ltx@empty
12488 \def\litalps@out#1{\special{ps:SDict begin #1 end}}%
12489 \def\headerps@out#1{\special{! #1}}%
12490 \input{pdfmark.def}%
12491 \ifx\@pdfproducer\relax
12492 \def\@pdfproducer{dvips + Distiller}%
12493 \fi
12494 \providecommand*\@pdfborder{0 0 1}
12495 \providecommand*\@pdfborderstyle{}
12496 \providecommand*\@pdfview{XYZ}
12497 \providecommand*\@pdfviewparams{ H.V}
12498 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12499 \g@addto@macro\Hy@FirstPageHook{%
12500 \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.

```

12501 /DvipsToPDF{72.27 mul Resolution div} def%
12502 /PDFToDvips{72.27 div Resolution mul} def%
12503 /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.

```

12504 /BorderArrayPatch{%
12505   [exch{%
12506     dup dup type/integertype eq exch type/realtype eq or%
12507     {BPToDvips}if%
12508   }forall]%
12509 }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.

```

12510 /HyperBorder {1 PDFToDvips} def%
12511 /H.V {pdf@hoff pdf@voff null} def%
12512 /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

```

12513 /H.S {%
12514   currentpoint %
12515   HyperBorder add /pdf@lly exch def %
12516   dup DvipsToPDF 72 add /pdf@hoff exch def %
12517   HyperBorder sub /pdf@llx exch def%
12518 } def%

```

The calculation of upper left y is done without raising the point in $\text{T}_{\text{E}}\text{X}$, by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

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

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

```

12519 /H.L {%
12520   2 sub dup%
12521   /HyperBasePt exch def %
12522   PDFToDvips /HyperBaseDvips exch def %
12523   currentpoint %
12524   HyperBaseDvips sub /pdf@ury exch def%
12525   /pdf@urx exch def%
12526 } def%
12527 /H.A {%
12528   H.L %
12529 % |pdf@voff| = the distance from the top of the page to a point
12530 % |\baselineskip| above the current point in PDF coordinates

```

```

12531    currentpoint exch pop %
12532    vsize 72 sub exch DvipsToPDF %
12533    HyperBasePt sub % baseline skip
12534    sub /pdf@voff exch def%
12535  } def%
12536  /H.R {%
12537    currentpoint %
12538    HyperBorder sub /pdf@ury exch def %
12539    HyperBorder add /pdf@urx exch def %
12540  % | /pdf@voff| = the distance from the top of the page to the current point, in
12541  % PDF coordinates
12542    currentpoint exch pop vsize 72 sub %
12543    exch DvipsToPDF sub /pdf@voff exch def%
12544  } def%
12545 }%
12546 }
12547 \AtBeginShipoutFirst{%
12548   \ifHy@setpagesize
12549     \begingroup
12550       \@ifundefined{stockwidth}{-%
12551         \ifdim\paperwidth>\z@
12552           \ifdim\paperheight>\z@
12553             \special{papersize=\the\paperwidth,\the\paperheight}%
12554           \fi
12555         \fi
12556       }{%
12557         \ifdim\stockwidth>\z@
12558           \ifdim\stockheight>\z@
12559             \special{papersize=\the\stockwidth,\the\stockheight}%
12560           \fi
12561         \fi
12562       }%
12563     \endgroup
12564   \fi
12565   \Hy@DisableOption{setpagesize}%
12566 }
12567 \def\setpdfinkmargin#1{%
12568   \begingroup
12569     \setlength{\dimen@}{#1}%
12570     \literalps@out{%
12571       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12572     }%
12573   \endgroup
12574 }
12575 </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.

```

12576 <*vtexpdfmark>
12577 \providecommand*\XR@ext}{pdf}
12578 \let\Hy@raisedlink\ltx@empty
12579 \def\literalps@out#1{\special{pS:#1}}%

```



```

12580 \def\headerps@out#1{\immediate\special{pS:#1}}%
12581 \input{pdfmark.def}%
12582 \ifx\@pdfproducer\relax
12583   \ifnum\OpMode=\@ne
12584     \def\@pdfproducer{VTeX}%
12585   \else
12586     \def\@pdfproducer{VTeX + Distiller}%
12587   \fi
12588 \fi
12589 \providecommand*\@pdfborder{0 0 1}
12590 \providecommand*\@pdfborderstyle{}
12591 \providecommand*\@pdfview{XYZ}
12592 \providecommand*\@pdfviewparams{ H.V}

12593 \g@addto@macro\Hy@FirstPageHook{%
12594   \headerps@out{%
12595     /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.

```

12596   /HyperBorder {1} def%
12597   /H.V {pdf@hoff pdf@voff null} def%
12598   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12599   /H.S {%
12600     currentpoint %
12601     HyperBorder sub%
12602     /pdf@lly exch def %
12603     dup 72 add /pdf@hoff exch def %
12604     HyperBorder sub%
12605     /pdf@llx exch def%
12606   } def%

```

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

```

12607   /H.L {%
12608     2 sub%
12609     /HyperBasePt exch def %
12610     currentpoint %
12611     HyperBasePt add HyperBorder add%
12612     /pdf@ury exch def %
12613     HyperBorder add%
12614     /pdf@urx exch def%
12615   } def%
12616   /H.A {%
12617     H.L %
12618     currentpoint exch pop %
12619     vsize 72 sub exch %
12620     HyperBasePt add add%
12621     /pdf@voff exch def%
12622   } def%

```

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

```

12623   /H.R {%
12624     currentpoint %
12625     HyperBorder add%

```

```

12626    /pdf@ury exch def %
12627    HyperBorder add%
12628    /pdf@urx exch def %
12629    currentpoint exch pop vsize 72 sub add%
12630    /pdf@voff exch def%
12631    } def%
12632    }%
12633 }

12634 \def\setpdfinkmargin#1{%
12635   \begingroup
12636   \setlength{\dimen@}{#1}%
12637   \literalps@out{%
12638     /HyperBorder{\strip@pt\dimen@}def%
12639   }%
12640   \endgroup
12641 }

12642 \</vtxpdfmark>

```

47.11 Textures

```

12643 <*textures>
12644 \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.

```

12645 \begingroup
12646 \obeylines %
12647 \gdef\Hy@ps@CR{\noexpand
12648 }%
12649 \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`.

```

12650 \def\literalps@out#1{%
12651   \special{postscript 0 0 transform}%
12652   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12653 }%
12654 %

```

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.

```

12655 \def\headerps@out#1{%
12656   \special{%
12657     prepostscript TeXdict begin\Hy@ps@CR
12658       #1\Hy@ps@CR
12659     end%
12660   }%
12661 }%
12662 %

```

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.

```

12663 \g@addto@macro\Hy@FirstPageHook{%
12664   \headerps@out{%
12665     /betterpdfmark {%
12666       systemdict begin %
12667         dup /BP eq%
12668         {cleartomark gsave nulldevice []}%
12669         {dup /EP eq%
12670          {cleartomark cleartomark grestore}%
12671          {cleartomark}%
12672         ifelse%
12673       }ifelse %
12674     end%
12675   }def\Hy@ps@CR
12676   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12677 }% end of \headerps@out
12678 }% end of \AtBeginShipoutFirst
12679 %
12680 \input{pdfmark.def}%
12681 %
12682 \ifx\@pdfproducer\relax
12683   \def\@pdfproducer{Textures + Distiller}%
12684 \fi
12685 \providecommand*\@pdfborder{0 0 1}
12686 \providecommand*\@pdfborderstyle{}
12687 \providecommand*\@pdfview{XYZ}
12688 \providecommand*\@pdfviewparams{ H.V}
12689 %

```

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 .

```

12690 \Hy@AtBeginDocument{%
12691   \headerps@out{%

```

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

```

12692   /vsize {\Hy@pageheight} def%
12693   /DvipsToPDF {} def%
12694   /PDFToDvips {} def%
12695   /BPToDvips {} def%
12696   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12697   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12698   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR

```

```

12699 /H.S {%
12700   currentpoint %
12701   HyperBorder add /pdf@lly exch def %
12702   dup DvipsToPDF 72 add /pdf@hoff exch def %
12703   HyperBorder sub /pdf@llx exch def%
12704 } def\Hy@ps@CR
12705 /H.L {%
12706   2 sub %
12707   PDFToDvips /HyperBase exch def %
12708   currentpoint %
12709   HyperBase sub /pdf@ury exch def%
12710   /pdf@urx exch def%
12711 } def\Hy@ps@CR
12712 /H.A {%
12713   H.L %
12714   currentpoint exch pop %
12715   vsize 72 sub exch DvipsToPDF %
12716   HyperBase sub % baseline skip
12717   sub /pdf@voff exch def%
12718 } def\Hy@ps@CR
12719 /H.R {%
12720   currentpoint %
12721   HyperBorder sub /pdf@ury exch def %
12722   HyperBorder add /pdf@urx exch def %
12723   currentpoint exch pop vsize 72 sub %
12724   exch DvipsToPDF sub /pdf@voff exch def%
12725 } def\Hy@ps@CR
12726 }%
12727 }

12728 \def\setpdfinkmargin#1{%
12729   \begingroup
12730     \setlength{\dimen@}{#1}%
12731     \literalps@out{%
12732       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12733     }%
12734   \endgroup
12735 }

12736 \Hy@AtBeginDocument{%
12737   \ifHy@colorlinks
12738     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12739   \fi
12740 }

```

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.

```

12741 \expandafter\let\expandafter\keepPDF@SetupDoc
12742   \csname PDF@SetupDoc\endcsname
12743 \def\PDF@SetupDoc{%
12744   \ifx\@baseurl\@empty
12745     \else
12746       \special{html:<base href="\@baseurl">}%
12747     \fi
12748   \keepPDF@SetupDoc
12749 }
12750 \Hy@WrapperDef\hyper@anchor#1{%
12751   \Hy@SaveLastskip

```

```

12752 \Hy@VerboseAnchor{#1}%
12753 \begingroup
12754 \let\protect=\string
12755 \special{html:<a name=%
12756 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12757 \endgroup
12758 \Hy@activeanchortrue
12759 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12760 \special{html:</a>}%
12761 \Hy@activeanchorfalse
12762 \Hy@RestoreLastskip
12763 }
12764 \Hy@WrapperDef\hyper@anchorstart#1{%
12765 \Hy@SaveLastskip
12766 \Hy@VerboseAnchor{#1}%
12767 \begingroup
12768 \hyper@chars
12769 \special{html:<a name=%
12770 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12771 \endgroup
12772 \Hy@activeanchortrue
12773 }
12774 \def\hyper@anchorend{%
12775 \special{html:</a>}%
12776 \Hy@activeanchorfalse
12777 \Hy@RestoreLastskip
12778 }
12779 \def\@urltype{url}
12780 \def\hyper@linkstart#1#2{%
12781 \Hy@VerboseLinkStart{#1}{#2}%
12782 \expandafter\Hy@colorlink\csname @#1color\endcsname
12783 \def\Hy@tempa{#1}%
12784 \ifx\Hy@tempa\@urltype
12785 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12786 \else
12787 \begingroup
12788 \hyper@chars
12789 \special{%
12790 html:<a href=%
12791 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
12792 }%
12793 \endgroup
12794 \fi
12795 }
12796 \def\hyper@linkend{%
12797 \special{html:</a>}%
12798 \Hy@endcolorlink
12799 }
12800 \def\hyper@linkfile#1#2#3{%
12801 \hyper@linkurl{#1}{#2}%
12802 \Hy@linkfileprefix#2\ifx\#3\else\##3\fi
12803 }%
12804 }
12805 \def\hyper@linkurl#1#2{%
12806 \leavevmode
12807 \ifHy@raiselinks
12808 \Hy@SaveSpaceFactor

```

```

12809 \Hy@SaveSavedSpaceFactor
12810 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12811 \Hy@RestoreSavedSpaceFactor
12812 \@linkdim\dp\@tempboxa
12813 \lower\@linkdim\hbox{%
12814   \hyper@chars
12815   \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12816 }%
12817 \Hy@colorlink\@urlcolor
12818 \Hy@RestoreSpaceFactor
12819 #1\Hy@xspace@end
12820 \Hy@SaveSpaceFactor
12821 \@linkdim\ht\@tempboxa
12822 \advance\@linkdim by -6.5\p@
12823 \raise\@linkdim\hbox{\special{html:</a>}}%
12824 \Hy@endcolorlink
12825 \Hy@RestoreSpaceFactor
12826 \else
12827 \begingroup
12828   \hyper@chars
12829   \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12830   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12831   \special{html:</a>}}%
12832   \Hy@endcolorlink
12833 \endgroup
12834 \fi
12835 }

```

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

```

12836 \def\hyper@link#1#2#3{%
12837   \Hy@VerboseLinkStart{#1}{#2}%
12838   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12839 }
12840 \def\hyper@image#1#2{%
12841   \begingroup
12842     \hyper@chars
12843     \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
12844   \endgroup
12845 }
12846 </textures>

```

47.12 dvipsone

```

12847 % \subsection{dvipsone driver}
12848 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12849 % |\special| commands.
12850 (*dvipsone)
12851 \providecommand*\XR@ext}{pdf}
12852 \let\Hy@raisedlink\ltx@empty
12853 \providecommand*\@pdfborder{0 0 1}
12854 \providecommand*\@pdfborderstyle{}
12855 \def\literalps@out#1{\special{ps:#1}}%
12856 \def\headerps@out#1{\special{headertext=#1}}%
12857 \input{pdfmark.def}%
12858 \ifx\@pdfproducer\relax
12859   \def\@pdfproducer{dvipsone + Distiller}%
12860 \fi
12861 \HyInfo@AddonUnsupportedtrue

```

```

12862 \def\PDF@FinishDoc{%
12863   \Hy@UseMaketitleInfos
12864   \HyInfo@TrappedUnsupported
12865   \special{PDF: Keywords \@pdfkeywords}%
12866   \special{PDF: Title \@pdftitle}%
12867   \special{PDF: Creator \@pdfcreator}%
12868   \ifx\@pdfcreationdate\@empty
12869   \else
12870     \special{PDF: CreationDate \@pdfcreationdate}%
12871   \fi
12872   \ifx\@pdfmoddate\@empty
12873   \else
12874     \special{PDF: ModDate \@pdfmoddate}%
12875   \fi
12876   \special{PDF: Author \@pdfauthor}%
12877   \ifx\@pdfproducer\relax
12878   \else
12879     \special{PDF: Producer \@pdfproducer}%
12880   \fi
12881   \special{PDF: Subject \@pdfsubject}%
12882   \Hy@DisableOption{pdfauthor}%
12883   \Hy@DisableOption{pdftitle}%
12884   \Hy@DisableOption{pdfsubject}%
12885   \Hy@DisableOption{pdfcreator}%
12886   \Hy@DisableOption{pdfcreationdate}%
12887   \Hy@DisableOption{pdfmoddate}%
12888   \Hy@DisableOption{pdfproducer}%
12889   \Hy@DisableOption{pdfkeywords}%
12890   \Hy@DisableOption{pdftrapped}%
12891   \Hy@DisableOption{pdfinfo}%
12892 }
12893 \def\PDF@SetupDoc{%
12894   \def\Hy@temp{}%
12895   \ifx\@pdfstartpage\@empty
12896   \else
12897     \ifx\@pdfstartview\@empty
12898     \else
12899       \edef\Hy@temp{%
12900         ,Page=\@pdfstartpage
12901         ,View=\@pdfstartview
12902       }%
12903     \fi
12904   \fi
12905   \edef\Hy@temp{%
12906     \noexpand\pdfmark{%
12907       pdfmark=/DOCVIEW,%
12908       PageMode=/\@pdfpagemode
12909       \Hy@temp
12910     }%
12911   }%
12912   \Hy@temp
12913   \ifx\@pdfpagescrop\@empty
12914   \else
12915     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12916   \fi
12917   \edef\Hy@temp{%
12918     \ifHy@pdftoolbar\else /HideToolbar true\fi

```

```

12919 \ifHy@pdfmenubar\else /HideMenubar true\fi
12920 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12921 \ifHy@pdfwindow /FitWindow true\fi
12922 \ifHy@pdfcenterwindow /CenterWindow true\fi
12923 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12924 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12925 \Hy@UseNameKey{Direction}\@pdfdirection
12926 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12927 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12928 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12929 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12930 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12931 \Hy@UseNameKey{Duplex}\@pdfduplex
12932 \ifx\@pdfpicktraybypdfsize\@empty
12933 \else
12934 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12935 \fi
12936 \ifx\@pdfprintpagerange\@empty
12937 \else
12938 /PrintPageRange[\@pdfprintpagerange]%
12939 \fi
12940 \ifx\@pdfnumcopies\@empty
12941 \else
12942 /NumCopies \@pdfnumcopies
12943 \fi
12944 }%
12945 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12946 \pdfmark{%
12947 pdfmark=/PUT,%
12948 Raw={%
12949 \string{Catalog\string}<<%
12950 \ifx\Hy@temp\@empty
12951 \else
12952 /ViewerPreferences<<\Hy@temp>>%
12953 \fi
12954 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12955 \ifx\@pdflang\relax
12956 \else
12957 /Lang(\@pdflang)%
12958 \fi
12959 \ifx\@baseurl\@empty
12960 \else
12961 /URI<</Base(\Hy@pstringB)>>%
12962 \fi
12963 >>%
12964 }%
12965 }%
12966 }
12967 \providecommand*\@pdfview{XYZ}
12968 \providecommand*\@pdfviewparams{ %
12969 gsave revscl currentpoint grestore %
12970 72 add exch pop null exch null%
12971 }
12972 \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.

```
12973 \g@addto@macro\Hy@FirstPageHook{%
12974 \headerps@out{%
```

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

```
12975 /DvipsToPDF { 65781 div } def%
12976 /PDFToDvips { 65781 mul } def%
12977 /BPToDvips{65781 mul}def%
12978 /HyperBorder { 1 PDFToDvips } def%
12979 /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.

```
12980 /BorderArrayPatch{%
12981 [exch{%
12982   dup dup type/integertype eq exch type/realtype eq or%
12983   {BPToDvips}if%
12984 }forall]%
12985 }def%

12986 /H.S {%
12987   currentpoint %
12988   HyperBorder add /pdf@lly exch def %
12989   dup DvipsToPDF 72 add /pdf@hoff exch def %
12990   HyperBorder sub /pdf@llx exch def%
12991 } def%
12992 /H.L {%
12993   2 sub %
12994   PDFToDvips /HyperBase exch def %
12995   currentpoint %
12996   HyperBase sub /pdf@ury exch def%
12997   /pdf@urx exch def%
12998 } def%
12999 /H.A {%
13000   H.L %
13001   currentpoint exch pop %
13002   HyperBase sub % baseline skip
13003   DvipsToPDF /pdf@voff exch def%
13004 } def%
13005 /H.R {%
13006   currentpoint %
13007   HyperBorder sub /pdf@ury exch def %
13008   HyperBorder add /pdf@urx exch def %
13009   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13010 } def%
13011 }%
13012 }

13013 \def\setpdfinkmargin#1{%
13014 \begingroup
13015 \setlength{\dimen@}{#1}%
13016 \literalps@out{%
13017 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13018 }%
13019 \endgroup
13020 }

13021 </dvipsone>
```

47.13 TeX4ht

```
13022 \<tex4ht>
13023 \providecommand*\XR@ext\html
13024 \let\Hy@raisedlink\ltx@empty
13025 \ifpackageloaded{tex4ht}{%
13026   \Hy@InfoNoLine{tex4ht is already loaded}%
13027 }{%
13028   \RequirePackage[htex4ht]{tex4ht}%
13029 }
13030 \hyperlinkfileprefix{}
13031 \let\PDF@FinishDoc\ltx@empty
13032 \def\PDF@SetupDoc{%
13033   \ifx\@baseurl\@empty
13034   \else
13035     \special{t4ht=<base href="\@baseurl">}%
13036   \fi
13037 }
13038 \Hy@WrapperDef\hyper@anchor#1{%
13039   \Hy@SaveLastskip
13040   \Hy@VerboseAnchor{#1}%
13041   \begingroup
13042     \let\protect=\string
13043     \special{t4ht=<a name=%
13044       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13045   \endgroup
13046   \Hy@activeanchortrue
13047   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13048   \special{t4ht=</a>}%
13049   \Hy@activeanchorfalse
13050   \Hy@RestoreLastskip
13051 }
13052 \Hy@WrapperDef\hyper@anchorstart#1{%
13053   \Hy@SaveLastskip
13054   \Hy@VerboseAnchor{#1}%
13055   \begingroup
13056     \hyper@chars\special{t4ht=<a name=%
13057       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13058   \endgroup
13059   \Hy@activeanchortrue
13060 }
13061 \def\hyper@anchorend{%
13062   \special{t4ht=</a>}%
13063   \Hy@activeanchorfalse
13064   \Hy@RestoreLastskip
13065 }
13066 \def\@urltype{url}
13067 \def\hyper@linkstart#1#2{%
13068   \Hy@VerboseLinkStart{#1}{#2}%
13069   \expandafter\Hy@colorlink\csname @#1color\endcsname
13070   \def\Hy@tempa{#1}%
13071   \ifx\Hy@tempa\@urltype
13072     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13073   \else
13074     \begingroup
13075       \hyper@chars
13076       \special{t4ht=<a href=%
13077         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
13078     \endgroup
13079   }
```

```

13078 \endgroup
13079 \fi
13080 }
13081 \def\hyper@linkend{%
13082 \special{t4ht=</a>}%
13083 \Hy@endcolorlink
13084 }
13085 \def\hyper@linkfile#1#2#3{%
13086 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13087 }
13088 \def\hyper@linkurl#1#2{%
13089 \leavevmode
13090 \ifHy@raiselinks
13091 \Hy@SaveSpaceFactor
13092 \Hy@SaveSavedSpaceFactor
13093 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13094 \Hy@RestoreSavedSpaceFactor
13095 \@linkdim\dp\@tempboxa
13096 \lower\@linkdim\hbox{%
13097 \begingroup
13098 \hyper@chars
13099 \special{%
13100 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13101 }%
13102 \endgroup
13103 }%
13104 \Hy@colorlink\@urlcolor
13105 \Hy@RestoreSpaceFactor
13106 #1\Hy@xspace@end
13107 \Hy@SaveSpaceFactor
13108 \Hy@endcolorlink
13109 \@linkdim\ht\@tempboxa
13110 \advance\@linkdim by -6.5\p@
13111 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13112 \Hy@RestoreSpaceFactor
13113 \else
13114 \begingroup
13115 \hyper@chars
13116 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13117 \Hy@colorlink\@urlcolor
13118 #1\Hy@xspace@end
13119 \Hy@endcolorlink
13120 \special{t4ht=</a>}%
13121 \endgroup
13122 \fi
13123 }

Poor implementation of \hyper@link without considering #1.
13124 \def\hyper@link#1#2#3{%
13125 \Hy@VerboseLinkStart{#1}{#2}%
13126 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
13127 }
13128 \def\hyper@image#1#2{%
13129 \begingroup
13130 \hyper@chars
13131 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13132 \endgroup
13133 }

```

```

13134 \let\autoref\ref
13135 \ifx \rEFLiNK \UnDef
13136   \def\rEFLiNK #1#2{#2}%
13137 \fi
13138 \let\backref\ltx@gobble

Fix for tex4ht.
13139 \AtBeginDocument{%
13140   \expandafter
13141   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13142   \expandafter\def\csname Make:Label\endcsname#1#2{%
13143     \ifhmode
13144       \Hy@SaveSpaceFactor
13145     \else
13146       \global\Hy@SavedSpaceFactor=1000 %
13147     \fi
13148     \Hy@OrgMakeLabel{#1}{%
13149       \Hy@RestoreSpaceFactor
13150       #2\Hy@xspace@end%
13151     \Hy@SaveSpaceFactor
13152   }%
13153   \Hy@RestoreSpaceFactor
13154 }%
13155 }
13156 </tex4ht>
13157 \*tex4htcfg>
13158 \IfFileExists{jobname.cfg}{\endinput}{}
13159 \Preamble{html}
13160   \begin{document}%
13161 \EndPreamble
13162 \def\TeX{TeX}
13163 \def\OMEGA{Omega}
13164 \def\LaTeX{LaTeX}
13165 \def\LaTeXe{\LaTeX2e}
13166 \def\eTeX{e-TeX}
13167 \def\MF{Metafont}
13168 \def\MP{MetaPost}
13169 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13170 \*pdfmark>
13171 \long\def\@Form[#1]{%
13172   \g@addto@macro\Hy@FirstPageHook{%
13173     \headerps@out{%
13174       [%
13175         /_objdef{pdfDocEncoding}%
13176         /type/dict%
13177         /OBJ pdfmark%
13178         [%
13179           {pdfDocEncoding}%
13180           <<%
13181             /Type/Encoding%
13182             /Differences[%
13183               24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13184             /tilde %

```

13185 39/quotesingle %
13186 96/grave %
13187 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13188 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13189 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13190 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13191 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13192 164/currency %
13193 166/brokenbar %
13194 168/dieresis/copyright/ordfeminine %
13195 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13196 /twosuperior/threesuperior/acute/mu %
13197 183/periodcentered/cedilla/onesuperior/ordmasculine %
13198 188/onequarter/onehalf/threequarters %
13199 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13200 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13201 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13202 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13203 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13204 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13205 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13206 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13207 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13208 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13209]%
13210 >>%
13211 /PUT pdfmark%
13212 [%
13213 /_objdef{ZaDb}%
13214 /type/dict%
13215 /OBJ pdfmark%
13216 [%
13217 {ZaDb}%
13218 <<%
13219 /Type/Font%
13220 /Subtype/Type1%
13221 /Name/ZaDb%
13222 /BaseFont/ZapfDingbats%
13223 >>%
13224 /PUT pdfmark%
13225 [%
13226 /_objdef{Helv}%
13227 /type/dict%
13228 /OBJ pdfmark%
13229 [%
13230 {Helv}%
13231 <<%
13232 /Type/Font%
13233 /Subtype/Type1%
13234 /Name/Helv%
13235 /BaseFont/Helvetica%
13236 /Encoding{pdfDocEncoding}%
13237 >>%
13238 /PUT pdfmark%
13239 [%
13240 /_objdef{aform}%
13241 /type/dict%

```

13242 /OBJ pdfmark%
13243 [%
13244   /_objdef{afields}%
13245   /type/array%
13246 /OBJ pdfmark%
13247 [%
13248   /_objdef{corder}%
13249   /type/array%
13250 /OBJ pdfmark%
13251 {%
13252   [%
13253     /BBox[0 0 100 100]%
13254     /_objdef{Check}%
13255     /BP pdfmark %
13256     1 0 0 setrgbcolor%
13257     /ZapfDingbats 80 selectfont %
13258     20 20 moveto%
13259     (4)show%
13260 [/EP pdfmark%
13261 [%
13262     /BBox[0 0 100 100]%
13263     /_objdef{Cross}%
13264     /BP pdfmark %
13265     1 0 0 setrgbcolor%
13266     /ZapfDingbats 80 selectfont %
13267     20 20 moveto%
13268     (8)show%
13269 [/EP pdfmark%
13270 [%
13271     /BBox[0 0 250 100]%
13272     /_objdef{Submit}%
13273     /BP pdfmark %
13274     0.6 setgray %
13275     0 0 250 100 rectfill %
13276     1 setgray %
13277     2 2 moveto %
13278     2 98 lineto %
13279     248 98 lineto %
13280     246 96 lineto %
13281     4 96 lineto %
13282     4 4 lineto %
13283     fill %
13284     0.34 setgray %
13285     248 98 moveto %
13286     248 2 lineto %
13287     2 2 lineto %
13288     4 4 lineto %
13289     246 4 lineto %
13290     246 96 lineto %
13291     fill%
13292     /Helvetica 76 selectfont %
13293     0 setgray %
13294     8 22.5 moveto%
13295     (Submit)show%
13296 [/EP pdfmark%
13297 [%
13298     /BBox[0 0 250 100]%

```

```

13299  /_objdef{SubmitP}%
13300  /BP pdfmark %
13301  0.6 setgray %
13302  0 0 250 100 rectfill %
13303  0.34 setgray %
13304  2 2 moveto %
13305  2 98 lineto %
13306  248 98 lineto %
13307  246 96 lineto %
13308  4 96 lineto %
13309  4 4 lineto %
13310  fill %
13311  1 setgray %
13312  248 98 moveto %
13313  248 2 lineto %
13314  2 2 lineto %
13315  4 4 lineto %
13316  246 4 lineto %
13317  246 96 lineto %
13318  fill%
13319  /Helvetica 76 selectfont %
13320  0 setgray %
13321  10 20.5 moveto%
13322  (Submit)show%
13323  [/EP pdfmark%
13324  } ?pdfmark%
13325  [%
13326  {aform}%
13327  <<%
13328  /Fields{afields}%
13329  /DR<<%
13330  /Font<<%
13331  /ZaDb{ZaDb}%
13332  /Helv{Helv}%
13333  >>%
13334  >>%
13335  /DA(/Helv 10 Tf 0 g)%
13336  /CO{corder}%
13337  \ifHy@pdfa
13338  \else
13339  \ifHyField@NeedAppearances
13340  /NeedAppearances true%
13341  \fi
13342  \fi
13343  >>%
13344  /PUT pdfmark%
13345  [%
13346  {Catalog}%
13347  <<%
13348  /AcroForm{aform}%
13349  >>%
13350  /PUT pdfmark%
13351  }}%
13352  \kvsetkeys{Form}{#1}%
13353  }
13354  \let\@endForm\ltx@empty
13355  \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum

```

```

13356 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13357 }

13358 \newcount\HyField@AnnotCount
13359 \HyField@AnnotCount=\z@
13360 \def\HyField@AdvanceAnnotCount{%
13361   \global\advance\HyField@AnnotCount\@ne
13362 }
13363 \def\HyField@TheAnnotCount{%
13364   \the\HyField@AnnotCount
13365 }

13366 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13367 \def\HyField@AddToFields#1{%
13368   \pdfmark{%
13369     pdfmark=/APPEND,%
13370     Raw={%
13371       \string{afields\string}%
13372       \string{#1\HyField@TheAnnotCount\string}%
13373     }%
13374   }%
13375   \ifx\Fld@calculate@code\ltx@empty
13376   \else
13377     \pdfmark{%
13378       pdfmark=/APPEND,%
13379       Raw={%
13380         \string{corder\string}%
13381         \string{#1\HyField@TheAnnotCount\string}%
13382       }%
13383     }%
13384   \fi
13385 }

13386 \def\@TextField[#1]#2{% parameters, label
13387   \def\Fld@name{#2}%
13388   \let\Fld@default\ltx@empty
13389   \let\Fld@value\@empty
13390   \def\Fld@width{\DefaultWidthofText}%
13391   \def\Fld@height{%
13392     \ifFld@multiline
13393       \DefaultHeightofTextMultiline
13394     \else
13395       \DefaultHeightofText
13396     \fi
13397   }%
13398   \begingroup
13399     \expandafter\HyField@SetKeys\expandafter{%
13400       \DefaultOptionsofText,#1%
13401     }%
13402     \HyField@FlagsText
13403     \ifFld@hidden\def\Fld@width{1sp}\fi
13404     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13405     \HyField@AdvanceAnnotCount
13406     \LayoutTextField{#2}{%
13407       \leavevmode
13408       \Hy@escapeform\PDFForm@Text
13409       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13410         pdfmark=/ANN,%
13411         objdef=text\HyField@TheAnnotCount,%

```



```

13412     Raw={\PDFForm@Text}%
13413   }%
13414 }%
13415   \HyField@AddToFields{text}%
13416 \endgroup
13417 }
13418 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13419   \def\Fld@name{#2}%
13420   \let\Fld@default\relax
13421   \let\Fld@value\relax
13422   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13423   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13424   \begingroup
13425     \Fld@menulength=0 %
13426     \@tempdima\z@
13427     \@for\@curropt:=#3\do{%
13428       \expandafter\Fld@checkequals\@curropt==\%
13429       \Hy@StepCount\Fld@menulength
13430       \settowidth{\@tempdimb}{\@currDisplay}%
13431       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13432     }%
13433     \advance\@tempdima by 15\p@
13434     \begingroup
13435       \HyField@SetKeys{#1}%
13436     \edef\x{\endgroup
13437       \noexpand\expandafter
13438       \noexpand\HyField@SetKeys
13439       \noexpand\expandafter{%
13440         \expandafter\noexpand\cname DefaultOptionsof%
13441         \ifFld@radio
13442           Radio%
13443         \else
13444           \ifFld@combo
13445             \ifFld@popdown
13446               PopdownBox%
13447             \else
13448               ComboBox%
13449             \fi
13450           \else
13451             ListBox%
13452           \fi
13453         \fi
13454       \endcsname
13455     }%
13456   }\x
13457   \HyField@SetKeys{#1}%
13458   \ifFld@hidden\def\Fld@width{1sp}\fi
13459   \ifx\Fld@value\relax
13460     \let\Fld@value\Fld@default
13461   \fi
13462   \LayoutChoiceField{#2}{%
13463     \ifFld@radio
13464       \HyField@FlagsRadioButton
13465       \@@Radio{#3}%
13466     \else
13467       \begingroup
13468       \HyField@FlagsChoice

```

```

13469 \ifdim\Fld@width<\@tempdima
13470 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13471 \edef\Fld@width{\the\@tempdima}%
13472 \fi
13473 \ifFld@combo
13474 \else
13475 \@tempdima=\the\Fld@menulength\Fld@charsize
13476 \advance\@tempdima by \Fld@borderwidth bp %
13477 \advance\@tempdima by \Fld@borderwidth bp %
13478 \edef\Fld@height{\the\@tempdima}%
13479 \fi
13480 \@@ListBox{#3}%
13481 \endgroup
13482 \fi
13483 }%
13484 \endgroup
13485 }
13486 \def\@@Radio#1{%
13487 \Fld@listcount=0 %
13488 \EdefEscapeName\Fld@default{\Fld@default}%
13489 \@for\@curropt:=#1\do{%
13490 \expandafter\Fld@checkequals\@curropt==\%
13491 \EdefEscapeName\@currValue{\@currValue}%
13492 \Hy@StepCount\Fld@listcount
13493 \@currDisplay\space
13494 \Hy@escapeform\PDFForm@Radio
13495 \ifnum\Fld@listcount=1 %
13496 \HyField@AdvanceAnnotCount
13497 \fi
13498 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13499 pdfmark=/ANN,%
13500 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13501 Raw={%
13502 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13503 }%
13504 } % deliberate space between radio buttons
13505 \ifnum\Fld@listcount=1 %
13506 \HyField@AddToFields{radio}%
13507 \fi
13508 }%
13509 }
13510 \newcount\Fld@listcount
13511 \def\@@ListBox#1{%
13512 \HyField@PDFChoices{#1}%
13513 \Hy@escapeform\PDFForm@List
13514 \HyField@AdvanceAnnotCount
13515 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13516 pdfmark=/ANN,%
13517 objdef=list\HyField@TheAnnotCount,%
13518 Raw={\PDFForm@List}%
13519 }%
13520 \HyField@AddToFields{list}%
13521 }
13522 \def\@PushButton[#1]#2{% parameters, label
13523 \def\Fld@name{#2}%
13524 \begingroup
13525 \expandafter\HyField@SetKeys\expandafter{%

```

```

13526     \DefaultOptionsofPushButton,#1%
13527 }%
13528 \ifHy@pdfa
13529     \Hy@Error{%
13530         PDF/A: Push button with JavaScript is prohibited%
13531     }\@ehc
13532     \LayoutPushButtonField{%
13533         \leavevmode
13534         \MakeButtonField{#2}%
13535     }%
13536 \else
13537     \HyField@FlagsPushButton
13538     \ifFld@hidden\def\Fld@width{1sp}\fi
13539     \HyField@AdvanceAnnotCount
13540     \LayoutPushButtonField{%
13541         \leavevmode
13542         \Hy@escapeform\PDFForm@Push
13543         \pdfmark[\MakeButtonField{#2}]{%
13544             pdfmark=/ANN,%
13545             objdef=push\HyField@TheAnnotCount,%
13546             Raw={\PDFForm@Push}%
13547         }%
13548     }%
13549     \HyField@AddToFields{push}%
13550 \fi
13551 \endgroup
13552 }
13553 \def\@Submit[#1]#2{%
13554     \def\Fld@width{\DefaultWidthofSubmit}%
13555     \def\Fld@height{\DefaultHeightofSubmit}%
13556     \begingroup
13557         \expandafter\HyField@SetKeys\expandafter{%
13558             \DefaultOptionsofSubmit,#1%
13559         }%
13560         \HyField@FlagsPushButton
13561         \HyField@FlagsSubmit
13562         \ifFld@hidden\def\Fld@width{1sp}\fi
13563         \Hy@escapeform\PDFForm@Submit
13564         \HyField@AdvanceAnnotCount
13565         \pdfmark[\MakeButtonField{#2}]{%
13566             pdfmark=/ANN,%
13567             objdef=submit\HyField@TheAnnotCount,%
13568             Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13569     }%
13570     \HyField@AddToFields{submit}%
13571 \endgroup
13572 }
13573 \def\@Reset[#1]#2{%
13574     \def\Fld@width{\DefaultWidthofReset}%
13575     \def\Fld@height{\DefaultHeightofReset}%
13576     \begingroup
13577         \expandafter\HyField@SetKeys\expandafter{%
13578             \DefaultOptionsofReset,#1%
13579         }%
13580     \leavevmode
13581     \ifHy@pdfa
13582         \Hy@Error{%

```

```

13583     PDF/A: Reset action is prohibited%
13584   }\@ehc
13585   \MakeButtonField{#2}%
13586 \else
13587   \HyField@FlagsPushButton
13588   \ifFld@hidden\def\Fld@width{1sp}\fi
13589   \Hy@escapeform\PDFForm@Reset
13590   \HyField@AdvanceAnnotCount
13591   \pdfmark{\MakeButtonField{#2}}{%
13592     pdfmark=/ANN,%
13593     objdef=reset\HyField@TheAnnotCount,%
13594     Raw={\PDFForm@Reset}%
13595   }%
13596   \HyField@AddToFields{reset}%
13597 \fi
13598 \endgroup
13599 }%
13600 \def\@CheckBox[#1]#2{% parameters, label
13601   \def\Fld@name{#2}%
13602   \def\Fld@default{0}%
13603   \begingroup
13604     \def\Fld@width{\DefaultWidthofCheckBox}%
13605     \def\Fld@height{\DefaultHeightofCheckBox}%
13606     \expandafter\HyField@SetKeys\expandafter{%
13607       \DefaultOptionsofCheckBox,#1%
13608     }%
13609     \HyField@FlagsCheckBox
13610     \ifFld@hidden\def\Fld@width{1sp}\fi
13611     \HyField@AdvanceAnnotCount
13612     \LayoutCheckField{#2}{%
13613       \leavevmode
13614       \Hy@escapeform\PDFForm@Check
13615       \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
13616         pdfmark=/ANN,%
13617         objdef=check\HyField@TheAnnotCount,%
13618         Raw={\PDFForm@Check}%
13619       }%
13620     }%
13621     \HyField@AddToFields{check}%
13622   \endgroup
13623 }
13624 \</pdfmark>

```

48.2 HyperTeX

```

13625 \<*hypertex>
13626 \def\@Form[#1]{%
13627   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13628 }
13629 \let\@endForm\ltx@empty
13630 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13631   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13632 }
13633 \def\@TextField[#1]#2{% parameters, label
13634   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13635 }
13636 \def\@CheckBox[#1]#2{% parameters, label
13637   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%

```

```

13638 }
13639 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13640 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13641 }
13642 \def\@PushButton[#1]#2{% parameters, label
13643 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13644 }
13645 \def\@Reset[#1]#2{%
13646 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13647 }
13648 \def\@Submit[#1]#2{%
13649 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13650 }
13651 \</hypertex>

```

48.3 TeX4ht

```

13652 \*tex4ht
13653 \def\@Form[#1]{%
13654 \kvsetkeys{Form}{#1}%
13655 \HCode{<form action="\Form@action" method="\Form@method">}%
13656 }
13657 \def\@endForm{\HCode{</form>}}
13658 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13659 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13660 }
13661 \def\@TextField[#1]#2{% parameters, label
13662 \let\Hy@reserved@a\@empty
13663 \def\Fld@name{#2}%
13664 \let\Fld@default\ltx@empty
13665 \bgroup
13666 \Field@toks={ }%
13667 \kvsetkeys{Field}{#1}%
13668 \HCode{<label for="\Fld@name">#2</label>}%
13669 \ifFld@password
13670 \@@PasswordField
13671 \else
13672 \@@TextField
13673 \fi
13674 \egroup
13675 }
13676 \def\@@PasswordField{%
13677 \HCode{%
13678 <input type="password" %
13679 id="\Fld@name" %
13680 name="\Fld@name" %
13681 \ifFld@hidden type="hidden" \fi
13682 value="\Fld@default" %
13683 \the\Field@toks
13684 >%
13685 }%
13686 }
13687 \def\@@TextField{%
13688 \ifFld@multiline
13689 \HCode{<textarea %
13690 \ifFld@readonly readonly \fi
13691 id="\Fld@name" %
13692 name="\Fld@name" %

```

```

13693     \ifFld@hidden type="hidden" \fi
13694     \the\Field@toks>%
13695 }%
13696 \Fld@default
13697 \HCode{</textarea>}%
13698 \else
13699 \HCode{<input type="text" %
13700     \ifFld@readonly readonly \fi
13701     id="\Fld@name" %
13702     name="\Fld@name" %
13703     \ifFld@hidden type="hidden" \fi
13704     value="\Fld@default" %
13705     \the\Field@toks>%
13706 }%
13707 \fi
13708 }
13709 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13710 \def\Fld@name{#2}%
13711 \let\Fld@default\tx@empty
13712 \let\Hy@reserved@a\relax
13713 \begingroup
13714 \expandafter\Fld@findlength#3\\%
13715 \Field@toks={ }%
13716 \kvsetkeys{Field}{#1}%
13717 #2%
13718 \ifFld@radio
13719 \expandafter\@@Radio#3\\%
13720 \else
13721 \expandafter\@@Menu#3\\%
13722 \fi
13723 \endgroup
13724 }
13725 \def\Fld@findlength#1\\{%
13726 \Fld@menulength=0 %
13727 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13728 }
13729 \def\@@Menu#1\\{%
13730 \HCode{<select size="\the\Fld@menulength" %
13731     name="\Fld@name" %
13732     \the\Field@toks>%
13733 }%
13734 \@for\@curropt:=#1\do{%
13735 \expandafter\Fld@checkequals\@curropt==\\%
13736 \HCode{<option %
13737     \ifx\@curropt\Fld@default selected \fi
13738     value="\@currValue">\@currDisplay</option>%
13739 }%
13740 }%
13741 \HCode{</select>}%
13742 }
13743 \def\@@Radio#1\\{%
13744 \@for\@curropt:=#1\do{%
13745 \expandafter\Fld@checkequals\@curropt==\\%
13746 \HCode{<input type="radio" %
13747     \ifx\@curropt\Fld@default checked \fi
13748     name="\Fld@name" %
13749     value="\@currValue" %

```

```

13750 \the\Field@toks>%
13751 }%
13752 \@currDisplay
13753 }%
13754 }
13755 \def\@PushButton[#1]#2{% parameters, label
13756 \def\Fld@name{#2}%
13757 \bgroup
13758 \Field@toks={ }%
13759 \kvsetkeys{Field}{#1}%
13760 \HCode{<input type="button" %
13761 name="\Fld@name" %
13762 value="#2" %
13763 \the\Field@toks>%
13764 }%
13765 \HCode{</button>}%
13766 \egroup
13767 }
13768 \def\@Submit[#1]#2{%
13769 \HCode{<button type="submit">#2</button>}%
13770 }
13771 \def\@Reset[#1]#2{%
13772 \HCode{<button type="reset">#2</button>}%
13773 }
13774 \def\@CheckBox[#1]#2{% parameters, label
13775 \let\Hy@reserved@a\@empty
13776 \def\Fld@name{#2}%
13777 \def\Fld@default{0}%
13778 \bgroup
13779 \Field@toks={ }%
13780 \kvsetkeys{Field}{#1}%
13781 \HCode{<input type="checkbox" %
13782 \ifFld@checked checked \fi
13783 \ifFld@disabled disabled \fi
13784 \ifFld@readonly readonly \fi
13785 name="\Fld@name" %
13786 \ifFld@hidden type="hidden" \fi
13787 value="\Fld@default" %
13788 \the\Field@toks>%
13789 #2%
13790 }%
13791 \egroup
13792 }
13793 </tex4ht>

```

48.4 pdfTeX

```

13794 <(*pdfTeX)
13795 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13796 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13797 }
13798 \def\MakeFieldObject#1#2{\sbox0{#1}%
13799 \immediate\pdfxform0 %
13800 \expandafter\edef\csname #2Object\endcsname{%
13801 \the\pdflastxform\space 0 R%
13802 }%
13803 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13804 }%

```

```

13805 \let\HyField@afields\ltx@empty
13806 \let\HyField@cofields\ltx@empty
13807 \begingroup\expandafter\expandafter\expandafter\endgroup
13808 \expandafter\ifx\csname pdfastlink\endcsname\relax
13809   \let\HyField@AddToFields\relax
13810   \PackageInfo{hyperref}{%
13811     You need pdfTeX 1.40.0 for setting the /Fields entry.%
13812   \MessageBreak
13813     Adobe Reader/Acrobat accepts an empty /Field array,%
13814   \MessageBreak
13815     but other PDF viewers might complain%
13816   }%
13817 \else
13818   \let\HyField@AuxAddToFields\ltx@gobble
13819   \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13820   \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.

```

13821 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13822   \begingroup
13823     \Hy@safe@activestrue
13824     \let\ltx@secondoftwo\relax
13825     \ifx\HyField@cofields\ltx@empty
13826       \xdef\HyField@cofields{%
13827         \ltx@secondoftwo{#1}{ #2 0 R}%
13828       }%
13829     \else
13830       \let\ltx@secondoftwo\relax
13831       \def\HyField@AddCoField##1##2##3{%
13832         \ifx##1\ltx@empty
13833           \ltx@secondoftwo{#1}{ #2 0 R}%
13834         \expandafter\ltx@gobble
13835       \else
13836         \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13837           \ltx@secondoftwo{#1}{ #2 0 R}%
13838         \ltx@secondoftwo{##2}{##3}%
13839         \expandafter\expandafter\expandafter\ltx@gobble
13840       \else
13841         \ltx@secondoftwo{##2}{##3}%
13842       \fi
13843     \fi
13844     \HyField@AddCoField
13845   }%
13846   \xdef\HyField@cofields{%
13847     \expandafter\HyField@AddCoField
13848     \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13849   }%
13850 \fi
13851 \endgroup
13852 }%
13853 \Hy@AtBeginDocument{%
13854   \if@filesn
13855     \immediate\write\@mainaux{%
13856       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13857     }%
13858     \immediate\write\@mainaux{%
13859       \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%

```



```

13860 }%
13861 \fi
13862 \let\HyField@AfterAuxOpen\@firstofone
13863 \def\HyField@AuxAddToFields#1{%
13864   \xdef\HyField@afields{%
13865     \ifx\HyField@afields\@empty
13866       \else
13867         \HyField@afields
13868       \space
13869     \fi
13870     #1 0 R%
13871   }%
13872 }%
13873 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13874 }%
13875 \def\HyField@AddToFields{%
13876   \expandafter\HyField@@AddToFields\expandafter{%
13877     \the\pdfastlink
13878   }%
13879   \ifx\Fld@calculate@code\ltx@empty
13880   \else
13881     \begingroup
13882     \Hy@safe@activestruer
13883     \edef\Hy@temp{%
13884       \endgroup
13885       \if@files
13886         \write\@mainaux{%
13887           \string\HyField@AuxAddToCoFields{%
13888             \Fld@calculate@sortkey
13889           }{%
13890             \the\pdfastlink
13891           }%
13892         }%
13893       \fi
13894     }%
13895     \Hy@temp
13896   \fi
13897 }%
13898 \def\HyField@@AddToFields#1{%
13899   \HyField@AfterAuxOpen{%
13900     \if@files
13901       \write\@mainaux{%
13902         \string\HyField@AuxAddToFields{#1}%
13903       }%
13904     \fi
13905   }%
13906 }%
13907 \fi
13908 \def\@Form[#1]{%
13909   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13910   \kvsetkeys{Form}{#1}%
13911   \pdf@ifdraftmode{}{%
13912     \Hy@FormObjects
13913     \ifnum\pdfTeXversion>13 %
13914       \pdfrefobj\OBJ@pdfdocencoding
13915       \pdfrefobj\OBJ@ZaDb
13916       \pdfrefobj\OBJ@Helv

```

```

13917 \fi
13918 \AtVeryEndDocument{%
13919 \immediate\pdfobj{%
13920 <<%
13921 /Fields[\HyField@afields]%
13922 \ifx\HyField@cofields\ltx@empty
13923 \else
13924 /CO[\romannumeral-`\Q\HyField@cofields]%
13925 \fi
13926 /DR<<%
13927 /Font<<%
13928 /ZaDb \OBJ@ZaDb\space 0 R%
13929 /Helv \OBJ@Helv\space 0 R%
13930 >>%
13931 >>%
13932 /DA(/Helv 10 Tf 0 g)%
13933 \ifHy@pdfa
13934 \else
13935 \ifHyField@NeedAppearances
13936 /NeedAppearances true%
13937 \fi
13938 \fi
13939 >>%
13940 }%
13941 \edef\OBJ@acroform{\the\pdflastobj}%
13942 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13943 }%
13944 }%
13945 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13946 \begingroup
13947 \fontfamily{pzd}%
13948 \fontencoding{U}%
13949 \fontseries{m}%
13950 \fontshape{n}%
13951 \selectfont
13952 \char123 %
13953 \endgroup
13954 }{Ding}%
13955 \MakeFieldObject{%
13956 \fbox{\textcolor{yellow}{\textsf{Submit}}}}%
13957 }{Submit}%
13958 \MakeFieldObject{%
13959 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}}%
13960 }{SubmitP}%
13961 }
13962 \let\@endForm\ltx@empty
13963 \let\HyAnn@AbsPageLabel\ltx@empty
13964 \let\Fld@pageobjref\ltx@empty
13965 \ltx@ifundefined{pdfpageref}{%
13966 }{%
13967 \ltx@ifpackageloaded{zref-abspage}{%
13968 \newcount\HyAnn@Count
13969 \HyAnn@Count=\ltx@zero
13970 \def\HyAnn@AbsPageLabel{%
13971 \global\advance\HyAnn@Count by\ltx@one
13972 \zref@labelbyprops{HyAnn@the\HyAnn@Count}{abspage}%

```

```

13973 \zref@refused{HyAnn@\the\HyAnn@Count}%
13974 }%
13975 \def\Fld@pageobjref{%
13976 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13977 }{%
13978 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13979 /P \pdfpageref
13980 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13981 \space 0 R%
13982 }{%
13983 }%
13984 }%
13985 }%
13986 }{%
13987 }%
13988 }

13989 \def\@TextField[#1]#2{% parameters, label
13990 \def\Fld@name{#2}%
13991 \let\Fld@default\ltx@empty
13992 \let\Fld@value\@empty
13993 \def\Fld@width{\DefaultWidthofText}%
13994 \def\Fld@height{%
13995 \ifFld@multiline
13996 \DefaultHeightofTextMultiline
13997 \else
13998 \DefaultHeightofText
13999 \fi
14000 }%
14001 \begingroup
14002 \expandafter\HyField@SetKeys\expandafter{%
14003 \DefaultOptionsofText,#1%
14004 }%
14005 \PDFForm@Name
14006 \HyField@FlagsText
14007 \ifFld@hidden\def\Fld@width{1sp}\fi
14008 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14009 \LayoutTextField{#2}{%
14010 \leavevmode
14011 \HyAnn@AbsPageLabel
14012 \Hy@escapeform\PDFForm@Text
14013 \pdfstartlink user {\PDFForm@Text}\relax
14014 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14015 \HyField@AddToFields
14016 }%
14017 \endgroup
14018 }

14019 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14020 \def\Fld@name{#2}%
14021 \let\Fld@default\relax
14022 \let\Fld@value\relax
14023 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14024 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14025 \begingroup
14026 \Fld@menulength=0 %
14027 \@tempdima\z@
14028 \@for\@curropt:=#3\do{%
14029 \expandafter\Fld@checkequals\@curropt==\%

```

```

14030 \Hy@StepCount\Fld@menulength
14031 \settowidth{\@tempdimb}{\@currDisplay}%
14032 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14033 }%
14034 \advance\@tempdima by 15\p@
14035 \begingroup
14036 \HyField@SetKeys{#1}%
14037 \edef\x{\endgroup
14038 \noexpand\expandafter
14039 \noexpand\HyField@SetKeys
14040 \noexpand\expandafter{%
14041 \expandafter\noexpand\csname DefaultOptionsof%
14042 \ifFld@radio
14043 Radio%
14044 \else
14045 \ifFld@combo
14046 \ifFld@popdown
14047 PopdownBox%
14048 \else
14049 ComboBox%
14050 \fi
14051 \else
14052 ListBox%
14053 \fi
14054 \fi
14055 \endcsname
14056 }%
14057 }\x
14058 \HyField@SetKeys{#1}%
14059 \PDFForm@Name
14060 \ifFld@hidden\def\Fld@width{1sp}\fi
14061 \ifx\Fld@value\relax
14062 \let\Fld@value\Fld@default
14063 \fi
14064 \LayoutChoiceField{#2}{%
14065 \ifFld@radio
14066 \HyField@FlagsRadioButton
14067 \@@Radio{#3}%
14068 \else
14069 \begingroup
14070 \HyField@FlagsChoice
14071 \ifdim\Fld@width<\@tempdima
14072 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14073 \edef\Fld@width{\the\@tempdima}%
14074 \fi
14075 \ifFld@combo
14076 \else
14077 \@tempdima=\the\Fld@menulength\Fld@charsize
14078 \advance\@tempdima by \Fld@borderwidth bp %
14079 \advance\@tempdima by \Fld@borderwidth bp %
14080 \edef\Fld@height{\the\@tempdima}%
14081 \fi
14082 \@@ListBox{#3}%
14083 \endgroup
14084 \fi
14085 }%
14086 \endgroup

```

```

14087 }
14088 \def\@@Radio#1{%
14089   \Fld@listcount=0 %
14090   \EdefEscapeName\Fld@default{\Fld@default}%
14091   \@for\@curropt:=#1\do{%
14092     \expandafter\Fld@checkequals\@curropt==\%
14093     \EdefEscapeName\@currValue{\@currValue}%
14094     \Hy@StepCount\Fld@listcount
14095     \@currDisplay\space
14096     \leavevmode
14097     \HyAnn@AbsPageLabel
14098     \Hy@escapeform\PDFForm@Radio
14099     \pdfstartlink user {%
14100       \PDFForm@Radio
14101       /AP<<%
14102       /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.

```

14103       /\@currValue\space \DingObject
14104       >>%
14105       >>%
14106     }%
14107     \relax
14108     \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14109     \ifnum\Fld@listcount=1 %
14110       \HyField@AddToFields
14111     \fi
14112     \space % deliberate space between radio buttons
14113   }%
14114 }
14115 \newcount\Fld@listcount
14116 \def\@@Listbox#1{%
14117   \HyField@PDFChoices{#1}%
14118   \leavevmode
14119   \HyAnn@AbsPageLabel
14120   \Hy@escapeform\PDFForm@List
14121   \pdfstartlink user {\PDFForm@List}\relax
14122   \MakeChoiceField{\Fld@width}{\Fld@height}%
14123   \pdfendlink
14124   \HyField@AddToFields
14125 }
14126 \def\@PushButton[#1]#2{% parameters, label
14127   \def\Fld@name{#2}%
14128   \begingroup
14129     \expandafter\HyField@SetKeys\expandafter{%
14130       \DefaultOptionsofPushButton,#1%
14131     }%
14132     \PDFForm@Name
14133     \ifHy@pdfa
14134       \Hy@Error{%
14135         PDF/A: Push button with JavaScript is prohibited%
14136       }\@ehc
14137     \LayoutPushButtonField{%
14138       \leavevmode
14139       \MakeButtonField{#2}%
14140     }%

```

```

14141 \else
14142 \HyField@FlagsPushButton
14143 \ifFld@hidden\def\Fld@width{1sp}\fi
14144 \LayoutPushButtonField{%
14145 \leavevmode
14146 \HyAnn@AbsPageLabel
14147 \Hy@escapeform\PDFForm@Push
14148 \pdfstartlink user {\PDFForm@Push}\relax
14149 \MakeButtonField{#2}%
14150 \pdfendlink
14151 \HyField@AddToFields
14152 }%
14153 \fi
14154 \endgroup
14155 }
14156 \def\@Submit[#1]#2{%
14157 \def\Fld@width{\DefaultWidthofSubmit}%
14158 \def\Fld@height{\DefaultHeightofSubmit}%
14159 \begingroup
14160 \expandafter\HyField@SetKeys\expandafter{%
14161 \DefaultOptionsofSubmit,#1%
14162 }%
14163 \HyField@FlagsPushButton
14164 \HyField@FlagsSubmit
14165 \ifFld@hidden\def\Fld@width{1sp}\fi
14166 \leavevmode
14167 \HyAnn@AbsPageLabel
14168 \Hy@escapeform\PDFForm@Submit
14169 \pdfstartlink user {%
14170 \PDFForm@Submit
14171 /AP<</N \SubmitObject/D \SubmitPObject>>%
14172 }%
14173 \relax
14174 \MakeButtonField{#2}%
14175 \pdfendlink
14176 \HyField@AddToFields
14177 \endgroup
14178 }
14179 \def\@Reset[#1]#2{%
14180 \def\Fld@width{\DefaultWidthofReset}%
14181 \def\Fld@height{\DefaultHeightofReset}%
14182 \begingroup
14183 \expandafter\HyField@SetKeys\expandafter{%
14184 \DefaultOptionsofReset,#1%
14185 }%
14186 \leavevmode
14187 \ifHy@pdfa
14188 \Hy@Error{%
14189 PDF/A: Reset action is prohibited%
14190 } \@ehc
14191 \MakeButtonField{#2}%
14192 \else
14193 \HyField@FlagsPushButton
14194 \ifFld@hidden\def\Fld@width{1sp}\fi
14195 \HyAnn@AbsPageLabel
14196 \Hy@escapeform\PDFForm@Reset
14197 \pdfstartlink user {\PDFForm@Reset}\relax

```

```

14198 \MakeButtonField{#2}%
14199 \pdfendlink
14200 \HyField@AddToFields
14201 \fi
14202 \endgroup
14203 }
14204 \def\@CheckBox[#1]#2{% parameters, label
14205 \def\Fld@name{#2}%
14206 \def\Fld@default{0}%
14207 \begingroup
14208 \def\Fld@width{\DefaultWidthofCheckBox}%
14209 \def\Fld@height{\DefaultHeightofCheckBox}%
14210 \expandafter\HyField@SetKeys\expandafter{%
14211 \DefaultOptionsofCheckBox,#1%
14212 }%
14213 \PDFForm@Name
14214 \HyField@FlagsCheckBox
14215 \ifFld@hidden\def\Fld@width{1sp}\fi
14216 \LayoutCheckField{#2}{%
14217 \leavevmode
14218 \HyAnn@AbsPageLabel
14219 \Hy@escapeform\PDFForm@Check
14220 \pdfstartlink user {\PDFForm@Check}\relax
14221 \MakeCheckField{\Fld@width}{\Fld@height}%
14222 \pdfendlink
14223 \HyField@AddToFields
14224 }%
14225 \endgroup
14226 }
14227 \def\Hy@FormObjects{%
14228 \pdfobj {%
14229 <<%
14230 /Type/Encoding%
14231 /Differences[%
14232 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14233 /ring/tilde %
14234 39/quotesingle %
14235 96/grave %
14236 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14237 /fraction/guilsinglleft/guilsingright/minus/perthousand%
14238 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14239 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14240 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14241 164/currency %
14242 166/brokenbar %
14243 168/dieresis/copyright/ordfeminine %
14244 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14245 /twosuperior/threesuperior/acute/mu %
14246 183/periodcentered/cedilla/onesuperior/ordmasculine %
14247 188/onequarter/onehalf/threequarters %
14248 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14249 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14250 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14251 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14252 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14253 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14254 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```

```

14255      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
14256      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14257      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14258      ]%
14259      >>%
14260    }%
14261    \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
14262    \pdfobj{%
14263      <<%
14264      /Type/Font%
14265      /Subtype/Type1%
14266      /Name/ZaDb%
14267      /BaseFont/ZapfDingbats%
14268      >>%
14269    }%
14270    \xdef\OBJ@ZaDb{\the\pdflastobj}%
14271    \pdfobj{%
14272      <<%
14273      /Type/Font%
14274      /Subtype/Type1%
14275      /Name/Helv%
14276      /BaseFont/Helvetica%
14277      /Encoding \OBJ@pdfdocencoding\space 0 R%
14278      >>%
14279    }%
14280    \xdef\OBJ@Helv{\the\pdflastobj}%
14281    \global\let\Hy@FormObjects\relax
14282  }
14283 </pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf \TeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14284 <*\dvipdfm | xetex>

```

\@Gauge

```

14285 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14286   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14287 }

```

\@Form

```

14288 \def\@Form[#1]{%
14289   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14290   \kvsetkeys{Form}{#1}%
14291   \Hy@FormObjects
14292   \@pdfm@mark{obj @afields []}%
14293   \@pdfm@mark{obj @corder []}%
14294   \@pdfm@mark{%
14295     obj @aform <<%
14296     /Fields @afields%
14297     /DR<<%
14298     /Font<<%
14299     /ZaDb @OBJZaDb%
14300     /Helv @OBJHelv%
14301     >>%
14302     >>%
14303     /DA(/Helv 10 Tf 0 g)%

```



```

14304      /CO @corder%
14305      \ifHy@pdfa
14306      \else
14307        \ifHyField@NeedAppearances
14308          /NeedAppearances true%
14309        \fi
14310      \fi
14311    >>%
14312  }%
14313  \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14314 }

\@endForm

14315 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
14316 \def\dvipdfm@setdim{%
14317   height \the\ht\pdfm@box\space
14318   width \the\wd\pdfm@box\space
14319   depth \the\dp\pdfm@box\space
14320 }

\HyField@AnnotCount
14321 \newcount\HyField@AnnotCount
14322 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
14323 \def\HyField@AdvanceAnnotCount{%
14324   \global\advance\HyField@AnnotCount\@ne
14325 }

\HyField@TheAnnotCount
14326 \def\HyField@TheAnnotCount{%
14327   \the\HyField@AnnotCount
14328 }

\Fld@pageobjref
14329 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
14330 \def\HyField@AddToFields#1{%
14331   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14332   \ifx\Fld@calculate@code\ltx@empty
14333   \else
14334     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14335   \fi
14336 }

\@TextField
14337 \def\@TextField[#1]#2{% parameters, label
14338   \def\Fld@name{#2}%
14339   \let\Fld@default\ltx@empty
14340   \let\Fld@value\@empty
14341   \def\Fld@width{\DefaultWidthofText}%
14342   \def\Fld@height{%
14343     \ifFld@multiline

```

```

14344 \DefaultHeightofTextMultiline
14345 \else
14346 \DefaultHeightofText
14347 \fi
14348 }%
14349 \begingroup
14350 \expandafter\HyField@SetKeys\expandafter{%
14351 \DefaultOptionsofText,#1%
14352 }%
14353 \PDFForm@Name
14354 \HyField@FlagsText
14355 \ifFld@hidden\def\Fld@width{1sp}\fi
14356 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
14357 \setbox\pdfm@box=\hbox{%
14358 \MakeTextField{\Fld@width}{\Fld@height}%
14359 }%
14360 \HyField@AdvanceAnnotCount
14361 \LayoutTextField{#2}{%
14362 \leavevmode
14363 \Hy@escapeform\PDFForm@Text
14364 \@pdfm@mark{%
14365 ann @text\HyField@TheAnnotCount\space
14366 \dvipdfm@setdim << \PDFForm@Text >>%
14367 }%
14368 }%
14369 \unhbox\pdfm@box
14370 \HyField@AddToFields{text}%
14371 % record in @afields array
14372 \endgroup
14373 }

```

\@ChoiceMenu

```

14374 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14375 \def\Fld@name{#2}%
14376 \let\Fld@default\relax
14377 \let\Fld@value\relax
14378 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14379 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14380 \begingroup
14381 \Fld@menulength=0 %
14382 \@tempdima\z@
14383 \@for\@curropt:=#3\do{%
14384 \expandafter\Fld@checkequals\@curropt==\%
14385 \Hy@StepCount\Fld@menulength
14386 \settowidth{\@tempdimb}{\@currDisplay}%
14387 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14388 }%
14389 \advance\@tempdima by 15\p@
14390 \begingroup
14391 \HyField@SetKeys{#1}%
14392 \edef\x{\endgroup
14393 \noexpand\expandafter
14394 \noexpand\HyField@SetKeys
14395 \noexpand\expandafter{%
14396 \expandafter\noexpand\curname DefaultOptionsof%
14397 \ifFld@radio
14398 Radio%
14399 \else

```

```

14400         \ifFld@combo
14401         \ifFld@popdown
14402             PopdownBox%
14403         \else
14404             ComboBox%
14405         \fi
14406     \else
14407         ListBox%
14408     \fi
14409 \fi
14410 \endcsname
14411 }%
14412 }\x
14413 \HyField@SetKeys{#1}%
14414 \PDFForm@Name
14415 \ifFld@hidden\def\Fld@width{1sp}\fi
14416 \ifx\Fld@value\relax
14417     \let\Fld@value\Fld@default
14418 \fi
14419 \LayoutChoiceField{#2}{%
14420     \ifFld@radio
14421         \HyField@FlagsRadioButton
14422         \@@Radio{#3}%
14423     \else
14424         \begingroup
14425             \HyField@FlagsChoice
14426             \ifdim\Fld@width<\@tempdima
14427                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14428                 \edef\Fld@width{\the\@tempdima}%
14429             \fi
14430             \ifFld@combo
14431             \else
14432                 \@tempdima=\the\Fld@menulength\Fld@charsize
14433                 \advance\@tempdima by \Fld@borderwidth bp %
14434                 \advance\@tempdima by \Fld@borderwidth bp %
14435                 \edef\Fld@height{\the\@tempdima}%
14436             \fi
14437             \@@ListBox{#3}%
14438         \endgroup
14439     \fi
14440 }%
14441 \endgroup
14442 }

```

\@@Radio

```

14443 \def\@@Radio#1{%
14444     \Fld@listcount=0 %
14445     \EdefEscapeName\Fld@default{\Fld@default}%
14446     \setbox\pdfm@box=\hbox{%
14447         \MakeRadioField{\Fld@width}{\Fld@height}%
14448     }%
14449     \@for\@curropt:=#1\do{%
14450         \expandafter\Fld@checkequals\@curropt==\\%
14451         \EdefEscapeName\@currValue{\@currValue}%
14452         \Hy@StepCount\Fld@listcount
14453         \@currDisplay\space
14454         \leavevmode
14455         \Hy@escapeform\PDFForm@Radio

```

```

14456 \ifnum\Fld@listcount=1 %
14457 \HyField@AdvanceAnnotCount
14458 \fi
14459 \@pdfm@mark{%
14460 ann %
14461 \ifnum\Fld@listcount=1 %
14462 @radio\HyField@TheAnnotCount%
14463 \space
14464 \fi
14465 \dvipdfm@setdim
14466 <<%
14467 \PDFForm@Radio
14468 /AP<</N<</\@currValue /null>>>%
14469 >>%
14470 }%
14471 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14472 \ifnum\Fld@listcount=1 %
14473 \HyField@AddToFields{radio}%
14474 \fi
14475 }%
14476 }

\Fld@listcount
14477 \newcount\Fld@listcount

@@@Listbox
14478 \def\@@Listbox#1{%
14479 \HyField@PDFChoices{#1}%
14480 \setbox\pdfm@box=\hbox{%
14481 \MakeChoiceField{\Fld@width}{\Fld@height}%
14482 }%
14483 \leavevmode
14484 \Hy@escapeform\PDFForm@List
14485 \HyField@AdvanceAnnotCount
14486 \@pdfm@mark{%
14487 ann @list\HyField@TheAnnotCount\space
14488 \dvipdfm@setdim
14489 <<\PDFForm@List>>%
14490 }%
14491 \unhbox\pdfm@box
14492 \HyField@AddToFields{list}%
14493 }

\@PushButton
14494 \def\@PushButton[#1]#2{% parameters, label
14495 \def\Fld@name{#2}%
14496 \begingroup
14497 \expandafter\HyField@SetKeys\expandafter{%
14498 \DefaultOptionsofPushButton,#1%
14499 }%
14500 \PDFForm@Name
14501 \ifHy@pdfa
14502 \Hy@Error{%
14503 PDF/A: Push button with JavaScript is prohibited%
14504 } \@ehc
14505 \LayoutPushButtonField{%
14506 \leavevmode

```

```

14507     \MakeButtonField{#2}%
14508 }%
14509 \else
14510     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14511     \HyField@FlagsPushButton
14512     \ifFld@hidden\def\Fld@width{1sp}\fi
14513     \HyField@AdvanceAnnotCount
14514     \LayoutPushButtonField{%
14515         \leavevmode
14516         \Hy@escapeform\PDFForm@Push
14517         \@pdfm@mark{%
14518             ann @push\HyField@TheAnnotCount\space
14519             \dvi pdfm@setdim
14520             <<\PDFForm@Push>>%
14521         }%
14522     }%
14523     \unhbox\pdfm@box
14524     \HyField@AddToFields{push}%
14525 \fi
14526 \endgroup
14527 }

\@Submit
14528 \def\@Submit[#1]#2{%
14529     \def\Fld@width{\DefaultWidthofSubmit}%
14530     \def\Fld@height{\DefaultHeightofSubmit}%
14531     \begingroup
14532     \expandafter\HyField@SetKeys\expandafter{%
14533         \DefaultOptionsofSubmit,#1%
14534     }%
14535     \HyField@FlagsPushButton
14536     \HyField@FlagsSubmit
14537     \ifFld@hidden\def\Fld@width{1sp}\fi
14538     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14539     \leavevmode
14540     \Hy@escapeform\PDFForm@Submit
14541     \HyField@AdvanceAnnotCount
14542     \@pdfm@mark{%
14543         ann @submit\HyField@TheAnnotCount\space
14544         \dvi pdfm@setdim
14545         <<\PDFForm@Submit>>%
14546     }%
14547     \unhbox\pdfm@box%
14548     \HyField@AddToFields{submit}%
14549 \endgroup
14550 }

\@Reset
14551 \def\@Reset[#1]#2{%
14552     \def\Fld@width{\DefaultWidthofReset}%
14553     \def\Fld@height{\DefaultHeightofReset}%
14554     \begingroup
14555     \expandafter\HyField@SetKeys\expandafter{%
14556         \DefaultOptionsofReset,#1%
14557     }%
14558     \leavevmode
14559     \ifHy@pdfa

```

```

14560 \Hy@Error{%
14561     PDF/A: Reset action is prohibited%
14562 } \@ehc
14563 \MakeButtonField{#2}%
14564 \else
14565 \HyField@FlagsPushButton
14566 \ifFld@hidden\def\Fld@width{1sp}\fi
14567 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14568 \Hy@escapeform\PDFForm@Reset
14569 \HyField@AdvanceAnnotCount
14570 \@pdfm@mark{%
14571     ann @reset\HyField@TheAnnotCount\space
14572 \dvipdfm@setdim
14573 <<\PDFForm@Reset>>%
14574 }%
14575 \unhbox\pdfm@box
14576 \HyField@AddToFields{reset}%
14577 \fi
14578 \endgroup
14579 }

```

\@CheckBox

```

14580 \def\@CheckBox[#1]#2{% parameters, label
14581 \def\Fld@name{#2}%
14582 \def\Fld@default{0}%
14583 \begingroup
14584 \def\Fld@width{\DefaultWidthofCheckBox}%
14585 \def\Fld@height{\DefaultHeightofCheckBox}%
14586 \expandafter\HyField@SetKeys\expandafter{%
14587 \DefaultOptionsofCheckBox,#1%
14588 }%
14589 \PDFForm@Name
14590 \HyField@FlagsCheckBox
14591 \ifFld@hidden\def\Fld@width{1sp}\fi
14592 \setbox\pdfm@box=\hbox{%
14593 \MakeCheckField{\Fld@width}{\Fld@height}%
14594 }%
14595 \HyField@AdvanceAnnotCount
14596 \LayoutCheckField{#2}{%
14597 \leavevmode
14598 \Hy@escapeform\PDFForm@Check
14599 \@pdfm@mark{%
14600     ann @check\HyField@TheAnnotCount\space
14601 \dvipdfm@setdim
14602 <<\PDFForm@Check>>%
14603 }%
14604 \unhbox\pdfm@box
14605 \HyField@AddToFields{check}%
14606 }%
14607 \endgroup
14608 }

14609 \def\Hy@FormObjects{%
14610 \@pdfm@mark{obj @OBJpdfdocencoding%
14611 <<%
14612 /Type/Encoding%
14613 /Differences%
14614 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %

```

14615 39/quotesingle %
14616 96/grave %
14617 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14618 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14619 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14620 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14621 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14622 164/currency %
14623 166/brokenbar %
14624 168/dieresis/copyright/ordfeminine %
14625 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14626 /twosuperior/threesuperior/acute/mu %
14627 183/periodcentered/cedilla/onesuperior/ordmasculine %
14628 188/onequarter/onehalf/threequarters %
14629 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14630 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14631 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14632 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14633 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14634 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14635 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14636 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14637 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14638 /thorn/ydieresis%
14639]%
14640 >>%
14641 }%
14642 \@pdfm@mark{obj @OBJZaDb%
14643 <<%
14644 /Type/Font%
14645 /Subtype/Type1%
14646 /Name/ZaDb%
14647 /BaseFont/ZapfDingbats%
14648 >>%
14649 }%
14650 \@pdfm@mark{obj @OBJHelv%
14651 <<%
14652 /Type/Font%
14653 /Subtype/Type1%
14654 /Name/Helv%
14655 /BaseFont/Helvetica%
14656 /Encoding @OBJpdfdocencoding%
14657 >>%
14658 }%
14659 \global\let\Hy@FormObjects\relax
14660 }
14661 </dvipdfm | xetex>

48.6 Common forms part

14662 (*pdfform)
\Fld@pageobjref
14663 \providecommand*{\Fld@pageobjref}{}
\Hy@escapestring
14664 \begingroup\expandafter\expandafter\expandafter\endgroup

```

14665 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14666 \let\Hy@escapestring\@firstofone
14667 \def\Hy@escapeform#1{%
14668 \ifHy@pdfescapeform
14669 \def\Hy@escapestring##1{%
14670 \noexpand\Hy@escapestring{\noexpand##1}%
14671 }%
14672 \edef\Hy@temp{#1}%
14673 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14674 \def\Hy@escapestring##1{%
14675 \@ifundefined{Hy@esc@\string##1}{%
14676 ##1%
14677 \ThisShouldNotHappen
14678 }{%
14679 \csname Hy@esc@\string##1\endcsname
14680 }%
14681 }%
14682 \else
14683 \let\Hy@escapestring\@firstofone
14684 \fi
14685 }%
14686 \def\Hy@@@escapeform#1\Hy@escapestring#2##3\@nil{%
14687 \ifx\##3\%
14688 \else
14689 \expandafter
14690 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14691 \ltx@ReturnAfterFi{%
14692 \Hy@@@escapeform#3\@nil
14693 }%
14694 \fi
14695 }%
14696 \else
14697 \def\Hy@escapeform#1{%
14698 \ifHy@pdfescapeform
14699 \let\Hy@escapestring\pdfescapestring
14700 \else
14701 \let\Hy@escapestring\@firstofone
14702 \fi
14703 }%
14704 \Hy@escapeform{}%
14705 \fi

```

\PDFForm@Name

```

14706 \def\PDFForm@Name{%
14707 \PDFForm@@Name\Fld@name
14708 \ifx\Fld@altname\relax
14709 \else
14710 \PDFForm@@Name\Fld@altname
14711 \fi
14712 \ifx\Fld@mappingname\relax
14713 \else
14714 \PDFForm@@Name\Fld@mappingname
14715 \fi
14716 }

```

\PDFForm@@Name

```

14717 \def\PDFForm@@Name#1{%

```



```

14718 \begingroup
14719 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14720 \ifHy@unicode
14721 \Hy@unicodedefalse
14722 \fi
14723 \fi
14724 \HyPsd@XeTeXBigCharstrue
14725 \pdfstringdef\Hy@gtemp#1%
14726 \endgroup
14727 \let#1\Hy@gtemp
14728 }

```

\Fld@additionalactions

```

14729 \def\Fld@@additionalactions{%
K input (keystroke) format
14730 \ifx\Fld@keystroke@code\@empty
14731 \else
14732 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14733 \fi
F display format
14734 \ifx\Fld@format@code\@empty
14735 \else
14736 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14737 \fi
V validation
14738 \ifx\Fld@validate@code\@empty
14739 \else
14740 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14741 \fi
C calculation
14742 \ifx\Fld@calculate@code\@empty
14743 \else
14744 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14745 \fi
Fo receiving the input focus
14746 \ifx\Fld@onfocus@code\@empty
14747 \else
14748 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14749 \fi
Bl loosing the input focus (blurred)
14750 \ifx\Fld@onblur@code\@empty
14751 \else
14752 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14753 \fi
D pressing the mouse button (down)
14754 \ifx\Fld@onmousedown@code\@empty
14755 \else
14756 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14757 \fi
U releasing the mouse button (up)
14758 \ifx\Fld@onmouseup@code\@empty
14759 \else
14760 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14761 \fi

```

E cursor enters the annotation's active area.

```
14762 \ifx\Fld@onenter@code\@empty
14763 \else
14764 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14765 \fi
```

X cursor exits the annotation's active area.

```
14766 \ifx\Fld@onexit@code\@empty
14767 \else
14768 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14769 \fi
14770 }
14771 \def\Fld@additionalactions{%
14772 \if-\Fld@@additionalactions-%
14773 \else
14774 \ifHy@pdfa
14775 \else
14776 /AA<<\Fld@@additionalactions>>%
14777 \fi
14778 \fi
14779 }
```

\Fld@annotnames

```
14780 \def\Fld@annotnames{%
14781 /T(\Fld@name)%
14782 \ifx\Fld@altname\relax
14783 \else
14784 /TU(\Fld@altname)%
14785 \fi
14786 \ifx\Fld@mappingname\relax
14787 \else
14788 /TM(\Fld@mappingname)%
14789 \fi
14790 }
```

\PDFForm@Check

```
14791 \def\PDFForm@Check{%
14792 /Subtype/Widget%
14793 \Fld@annotflags
14794 \Fld@pageobjref
14795 \Fld@annotnames
14796 /FT/Btn%
14797 \Fld@flags
14798 /Q \Fld@align
14799 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14800 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14801 /MK<<%
14802 \ifnum\Fld@rotation=z@
14803 \else
14804 /R \Fld@rotation
14805 \fi
14806 \ifx\Fld@bordercolor\relax
14807 \else
14808 /BC[\Fld@bordercolor]%
14809 \fi
14810 \ifx\Fld@bcolor\relax
14811 \else
```

```

14812    /BG[\Fld@bcolor]%
14813    \fi
14814    /CA(\Hy@escapestring{\Fld@cbsymbol})%
14815    >>%
14816    /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14817        \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14818    /H/P%
14819    \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14820    \Fld@additionalactions
14821 }

```

\PDFForm@Push

```

14822 \ifHy@pdfa
14823 \else
14824   \def\PDFForm@Push{%
14825     /Subtype/Widget%
14826     \Fld@annotflags
14827     \Fld@pageobjref
14828     \Fld@annotnames
14829     /FT/Btn%
14830     \Fld@flags
14831     /H/P%
14832     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14833     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14834         \ifx\Fld@bordercolor\relax\else 1\fi
14835         \space
14836     \else
14837       /MK<<%
14838         \ifnum\Fld@rotation=\z@
14839         \else
14840           /R \Fld@rotation
14841         \fi
14842         \ifx\Fld@bordercolor\relax
14843         \else
14844           /BC[\Fld@bordercolor]%
14845         \fi
14846       >>%
14847     \fi
14848     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14849     \Fld@additionalactions
14850   }%
14851 \fi

```

\PDFForm@List

```

14852 \def\PDFForm@List{%
14853   /Subtype/Widget%
14854   \Fld@annotflags
14855   \Fld@pageobjref
14856   \Fld@annotnames
14857   /FT/Ch%
14858   \Fld@flags
14859   /Q \Fld@align
14860   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14861   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14862       \ifx\Fld@bordercolor\relax\else 1\fi
14863       \ifx\Fld@bcolor\relax \else 1\fi
14864       \space

```

```

14865 \else
14866 /MK<<%
14867 \ifnum\Fld@rotation=\z@
14868 \else
14869 /R \Fld@rotation
14870 \fi
14871 \ifx\Fld@bordercolor\relax
14872 \else
14873 /BC[\Fld@bordercolor]%
14874 \fi
14875 \ifx\Fld@bcolor\relax
14876 \else
14877 /BG[\Fld@bcolor]%
14878 \fi
14879 >>%
14880 \fi
14881 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14882 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14883 \Fld@choices
14884 \Fld@additionalactions
14885 }

```

\PDFForm@Radio

```

14886 \def\PDFForm@Radio{%
14887 /Subtype/Widget%
14888 \Fld@annotflags
14889 \Fld@pageobjref
14890 \Fld@annotnames
14891 /FT/Btn%
14892 \Fld@flags
14893 /H/P%
14894 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14895 /MK<<%
14896 \ifnum\Fld@rotation=\z@
14897 \else
14898 /R \Fld@rotation
14899 \fi
14900 \ifx\Fld@bordercolor\relax
14901 \else
14902 /BC[\Fld@bordercolor]%
14903 \fi
14904 \ifx\Fld@bcolor\relax
14905 \else
14906 /BG[\Fld@bcolor]%
14907 \fi
14908 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14909 >>%
14910 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14911 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14912 \ifx\Fld@default\@empty
14913 /V/Off%
14914 /DV/Off%
14915 \else
14916 /V/\Fld@default
14917 /DV/\Fld@default
14918 \fi

```

```
14919 \Fld@additionalactions
14920 }
```

\PDFForm@Text

```
14921 \def\PDFForm@Text{%
14922   /Subtype/Widget%
14923   \Fld@annotflags
14924   \Fld@pageobjref
14925   \Fld@annotnames
14926   /FT/Tx%
14927   \Fld@flags
14928   /Q \Fld@align
14929   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14930   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14931     \ifx\Fld@bordercolor\relax\else 1\fi
14932     \ifx\Fld@bcolor\relax \else 1\fi
14933     \space
14934   \else
14935     /MK<<%
14936     \ifnum\Fld@rotation=\z@
14937     \else
14938       /R \Fld@rotation
14939     \fi
14940     \ifx\Fld@bordercolor\relax
14941     \else
14942       /BC[\Fld@bordercolor]%
14943     \fi
14944     \ifx\Fld@bcolor\relax
14945     \else
14946       /BG[\Fld@bcolor]%
14947     \fi
14948     >>%
14949   \fi
14950   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14951     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14952   /DV(\Hy@escapestring{\Fld@default})%
14953   /V(\Hy@escapestring{\Fld@value})%
14954   \Fld@additionalactions
14955   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14956 }
```

\PDFForm@Submit

```
14957 \def\PDFForm@Submit{%
14958   /Subtype/Widget%
14959   \Fld@annotflags
14960   \Fld@pageobjref
14961   \Fld@annotnames
14962   /FT/Btn%
14963   \Fld@flags
14964   /H/P%
14965   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14966   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14967     \ifx\Fld@bordercolor\relax\else 1\fi
14968     \space
14969   \else
14970     /MK<<%
14971     \ifnum\Fld@rotation=\z@
```

```

14972 \else
14973 /R \Fld@rotation
14974 \fi
14975 \ifx\Fld@bordercolor\relax
14976 \else
14977 /BC[\Fld@bordercolor]%
14978 \fi
14979 >>%
14980 \fi
14981 /A<<%
14982 /S/SubmitForm%
14983 /F<<%
14984 /FS/URL%
14985 /F(\Hy@escapestring{\Form@action})%
14986 >>%
14987 \Fld@submitflags
14988 >>%
14989 \Fld@additionalactions
14990 }

```

\PDFForm@Reset

```

14991 \ifHy@pdfa
14992 \else
14993 \def\PDFForm@Reset{%
14994 /Subtype/Widget%
14995 \Fld@annotflags
14996 \Fld@pageobjref
14997 \Fld@annotnames
14998 /FT/Btn%
14999 \Fld@flags
15000 /H/P%
15001 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15002 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15003 \ifx\Fld@bordercolor\relax\else 1\fi
15004 \space
15005 \else
15006 /MK<<%
15007 \ifnum\Fld@rotation=\z@
15008 \else
15009 /R \Fld@rotation
15010 \fi
15011 \ifx\Fld@bordercolor\relax
15012 \else
15013 /BC[\Fld@bordercolor]%
15014 \fi
15015 % /CA (Clear)
15016 % /AC (Done)
15017 >>%
15018 \fi
15019 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15020 /A<</S/ResetForm>>%
15021 \Fld@additionalactions
15022 }%
15023 \fi

15024 </pdfform>
15025 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
15026 \def\phantomsection{%
15027   \Hy@MakeCurrentHrefAuto{section*}%
15028   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15029 }
15030 \</package>
```

49.1 Bookmarks

```
15031 (*outlines)
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'s implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
15032 \def\Hy@writebookmark#1#2#3#4#5{%
15033   % section number, text, label, level, file
15034   \ifx\WriteBookmarks\relax%
15035   \else
15036     \ifnum#4>\Hy@bookmarksdepth\relax
15037     \else
15038       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15039     \fi
15040   \fi
15041 }
15042 \def\Hy@currentbookmarklevel{0}
15043 \def\Hy@numberline#1{#1 }
15044 \def\@@writetorep#1#2#3#4#5{%
15045   \begingroup
15046     \edef\Hy@tempa{#5}%
15047     \ifx\Hy@tempa\Hy@bookmarkstype
15048       \edef\Hy@level{#4}%
15049       \ifx\Hy@levelcheck Y%
15050         \@tempcnta\Hy@level\relax
15051         \advance\@tempcnta by -1 %
```

```

15052 \ifnum\Hy@currentbookmarklevel<\@tempcnta
15053 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15054 \advance\@tempcnta by 1 %
15055 \Hy@Warning{%
15056     Difference (\the\@tempcnta) between bookmark levels is %
15057     greater \MessageBreak than one, level fixed%
15058 }%
15059 \@tempcnta\Hy@currentbookmarklevel
15060 \advance\@tempcnta by 1 %
15061 \edef\Hy@level{\the\@tempcnta}%
15062 \fi
15063 \else
15064 \global\let\Hy@levelcheck Y%
15065 \fi
15066 \global\let\Hy@currentbookmarklevel\Hy@level
15067 \@tempcnta\Hy@level\relax
15068 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15069 \advance\@tempcnta by -1 %
15070 \edef\Hy@tempa{#3}%
15071 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15072 \ifx\Hy@tempa\Hy@tempb
15073 \Hy@Warning{%
15074     The anchor of a bookmark and its parent's must not%
15075     \MessageBreak be the same. Added a new anchor%
15076 }%
15077 \phantomsection
15078 \fi
15079 \ifHy@bookmarksnumbered
15080 \let\numberline\Hy@numberline
15081 \let\booknumberline\Hy@numberline
15082 \let\partnumberline\Hy@numberline
15083 \let\chapternumberline\Hy@numberline
15084 \else
15085 \let\numberline\@gobble
15086 \let\booknumberline\@gobble
15087 \let\partnumberline\@gobble
15088 \let\chapternumberline\@gobble
15089 \fi
15090 \HyPsd@XeTeXBigCharstrue
15091 \pdfstringdef\Hy@tempa{#2}%
15092 \HyPsd@SanitizeForOutFile\Hy@tempa
15093 \if@filesw
15094 \stepcounter{bookmark@seq@number}%
15095 \@ifundefined{@outlinefile}{%
15096 }{%
15097 \protected@write{@outlinefile}{%
15098 \protect\BOOKMARK
15099 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15100 {\Hy@tempa}{\Hy@tempb}%
15101 \@percentchar\space\thebookmark@seq@number
15102 }%
15103 }%
15104 \fi
15105 \fi
15106 \endgroup
15107 }
15108 \newcounter{bookmark@seq@number}

```



```

15109 \begingroup
15110 \lccode`=(`{ %
15111 \lccode`=(`} %
15112 \lccode`1=\z@
15113 \lccode`2=\z@
15114 \lccode`3=\z@
15115 \lccode`5=\z@
15116 \lccode`7=\z@
15117 \lccode`\#=\z@
15118 \lccode`\`=\z@
15119 \lccode`\{=\z@
15120 \lccode`\}= \z@
15121 \lowercase{%
15122 \endgroup
15123 \def\HyPsd@SanitizeForOutFile#1{%
15124 \@onelevel@sanitize\Hy@tempa
15125 \escapechar`\\ %
15126 \edef\Hy@tempa{%
15127 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15128 }%
15129 \edef\Hy@tempa{%
15130 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15131 }%
15132 }%
15133 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15134 #1%
15135 \ifx\\#2\\ %
15136 \expandafter\ltx@gobble
15137 \else
15138 \expandafter\ltx@firstofone
15139 \fi
15140 {%
15141 \string\173%
15142 \HyPsd@SanitizeOut@BraceLeft#2\@nil
15143 }%
15144 }%
15145 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15146 #1%
15147 \ifx\\#2\\ %
15148 \expandafter\ltx@gobble
15149 \else
15150 \expandafter\ltx@firstofone
15151 \fi
15152 {%
15153 \string\175%
15154 \HyPsd@SanitizeOut@BraceRight#2\@nil
15155 }%
15156 }%
15157 }

```

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

```

15158 \newcommand{\currentpdfbookmark}{%
15159 \pdfbookmark[\Hy@currentbookmarklevel]%
15160 }
15161 \newcommand{\subpdfbookmark}{%
15162 \@tempcnta\Hy@currentbookmarklevel
15163 \Hy@StepCount\@tempcnta

```

```

15164 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15165 }
15166 \newcommand{\belowpdfbookmark}[2]{%
15167 \@tempcnta\Hy@currentbookmarklevel
15168 \Hy@StepCount\@tempcnta
15169 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15170 \advance\@tempcnta by -1 %
15171 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15172 }

```

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.

```

15173 \renewcommand\pdfbookmark[3][0]{%
15174 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15175 \hyper@anchorstart{#3.#1}\hyper@anchorend
15176 }
15177 \def\BOOKMARK{%
15178 \ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15179 }
15180 \def\@BOOKMARK[#1]{%
15181 \ifnextchar{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
15182 }

```

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`

```

15183 \RequirePackage{rerunfilecheck}[2009/12/10]
15184 \def\Hy@OutlineRerunCheck{%
15185 \RerunFileCheck{\jobname.out}{%
15186 \immediate\closeout\@outlinefile
15187 }{%
15188 Rerun to get outlines right\MessageBreak
15189 or use package `bookmark'%
15190 }%
15191 }

```

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.

```

15192 (*vtex)
15193 \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.

```

15194 \begingroup
15195 \catcode`\'=12 %
15196 \ifnum\Hy@VTeXversion<650 %
15197 \catcode`\ "=12 %
15198 \gdef\hv@pdf@char#1#2#3{%

```

```

15199 \char
15200 \ifcase'#1#2#3 %
15201 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15202 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15203 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15204 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15205 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15206 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15207 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15208 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15209 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15210 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15211 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15212 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15213 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15214 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15215 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15216 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15217 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15218 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15219 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15220 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15221 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15222 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15223 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15224 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15225 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15226 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15227 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15228 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15229 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15230 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15231 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15232 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15233 \fi
15234 }%
15235 \else
15236 \gdef\hv@pdf@char{\char'}%
15237 \fi
15238 \endgroup

```

\@@BOOKMARK

```

15239 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15240 \expandafter\edef\csname @count@#3\endcsname{%
15241 \the\@serial@counter
15242 }%
15243 \edef\@mycount{\the\@serial@counter}%
15244 \Hy@StepCount\@serial@counter
15245 \edef\@parcount{%
15246 \expandafter\ifx\csname @count@#5\endcsname\relax
15247 0%
15248 \else
15249 \csname @count@#5\endcsname
15250 \fi
15251 }%
15252 \immediate\special{%
15253 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15254 s=\ifx#2-c\else o\fi,t=#4%

```

```

15255 }%
15256 }%

```

\ReadBookmarks

```

15257 \def\ReadBookmarks{%
15258   \begingroup
15259   \def\0{\hv@pdf@char 0}%
15260   \def\1{\hv@pdf@char 1}%
15261   \def\2{\hv@pdf@char 2}%
15262   \def\3{\hv@pdf@char 3}%
15263   \def\{({}%
15264   \def\)}{)%
15265   \def\do##1{%
15266     \ifnum\catcode`##1=\active
15267       \@makeother##1%
15268     \else
15269       \ifnum\catcode`##1=6 %
15270         \@makeother##1%
15271       \fi
15272     \fi
15273   }%
15274   \dospecials
15275   \Hy@safe@activetrue
15276   \InputIfFileExists{\jobname.out}{\}{}%
15277 \endgroup
15278 \ifx\WriteBookmarks\relax
15279 \else
15280   \if@filesw
15281     \newwrite\@outlinefile
15282     \Hy@OutlineRerunCheck
15283     \immediate\openout\@outlinefile=\jobname.out\relax
15284     \ifHy@typexml
15285       \immediate\write\@outlinefile{<relaxxml>\relax}%
15286     \fi
15287   \fi
15288   \fi
15289 }

15290 </vtex>
15291 <*\vtex>
15292 \def\ReadBookmarks{%
15293   \pdf@ifdraftmode{\}%
15294   \begingroup
15295   \def\do##1{%
15296     \ifnum\catcode`##1=\active
15297       \@makeother##1%
15298     \else
15299       \ifnum\catcode`##1=6 %
15300         \@makeother##1%
15301       \fi
15302     \fi
15303   }%
15304   \dospecials
15305   \Hy@safe@activetrue
15306   \escapechar=`\%
15307   \def\@@BOOKMARK[##1][##2]##3##4##5{%
15308     \calc@bm@number{##5}%

```

```

15309 }%
15310 \InputIfFileExists{\jobname.out}{-}{-}%
15311 \ifx\WriteBookmarks\relax
15312   \global\let\WriteBookmarks\relax
15313 \fi
15314 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15315   \def\Hy@temp{##4}%
15316 (*pdfTeX)
15317   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15318   \Hy@OutlineName{}\Hy@pstringName{%
15319     ##2\check@bm@number{##3}}%
15320 }{%
15321   \expandafter\strip@prefix\meaning\Hy@temp
15322 }%
15323 </pdfTeX>
15324 (*pdfmark)
15325   \pdfmark{%
15326     pdfmark=/OUT,%
15327     Count={##2\check@bm@number{##3}},%
15328     Dest={##3},%
15329     Title=\expandafter\strip@prefix\meaning\Hy@temp
15330 }%
15331 </pdfmark>
15332 (*dvipdfm|xetex)
15333   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15334   \@pdfm@mark{%
15335     outline \ifHy@DvipdfmxOutlineOpen
15336       [%
15337         \ifnum##21>\z@
15338         \else
15339         -%
15340         \fi
15341       ] %
15342     \fi
15343     ##1<<%
15344     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15345     /A<<%
15346     /S/GoTo%
15347     /D(\Hy@pstringName)%
15348     >>%
15349     >>%
15350   }%
15351 </dvipdfm|xetex>
15352 }%
15353 \begingroup
15354   \def\WriteBookmarks{0}%
15355   \InputIfFileExists{\jobname.out}{-}{-}%
15356 \endgroup
15357 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15358 \endgroup
15359 }%
15360 \ifx\WriteBookmarks\relax
15361 \else
15362   \if@files
15363     \newwrite\@outlinefile
15364     \Hy@OutlineRerunCheck
15365     \immediate\openout\@outlinefile=\jobname.out\relax

```

```

15366 \ifHy@typexml
15367 \immediate\write\@outlinefile{<relaxxml>\relax}%
15368 \fi
15369 \fi
15370 \fi
15371 }
15372 \<pdfTeX>
15373 \def\Hy@OutlineName#1#2#3#4{%
15374 \pdfoutline goto name{#2}count#3{#4}%
15375 }
15376 \</pdfTeX>
15377 \def\check@bm@number#1{%
15378 \expandafter\ifx\csname B_#1\endcsname\relax
15379 0%
15380 \else
15381 \csname B_#1\endcsname
15382 \fi
15383 }
15384 \def\calc@bm@number#1{%
15385 \@tempcnta=\check@bm@number{#1}\relax
15386 \advance\@tempcnta by 1 %
15387 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15388 }
15389 \</!vTeX>

15390 \ifHy@implicit
15391 \else
15392 \expandafter\endinput
15393 \fi

15394 \</outlines>
15395 \<*outlines | hypertex>

15396 \newlength\Hy@SectionHShift
15397 \def\Hy@SectionAnchorHref#1{%
15398 \ifx\protect\@typeset@protect
15399 \Hy@@SectionAnchor{#1}%
15400 \fi
15401 }
15402 \DeclareRobustCommand*\Hy@@SectionAnchor[1]{%
15403 \leavevmode
15404 \hbox to 0pt{%
15405 \kern-\Hy@SectionHShift
15406 \Hy@raisedlink{%
15407 \hyper@anchorstart{#1}\hyper@anchorend
15408 }%
15409 \hss
15410 }%
15411 }
15412 \let\H@old@ssect\@ssect
15413 \def\@ssect#1#2#3#4#5{%
15414 \Hy@MakeCurrentHrefAuto{section*}%
15415 \setlength{\Hy@SectionHShift}{#1}%
15416 \begingroup
15417 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15418 \toks\tw@\expandafter{%
15419 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15420 #5%
15421 }%

```

```

15422 \edef\x{\endgroup
15423   \the\toks@{\the\toks\tw@}%
15424 }\x
15425 }
15426 \let\H@old@schapter\@schapter
15427 \def\@schapter#1{%
15428   \begingroup
15429     \let\@mkboth\@gobbletwo
15430     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15431     \Hy@raisedlink{%
15432       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15433     }%
15434   \endgroup
15435   \H@old@schapter{#1}%
15436 }

```

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:

```

15437 \ltx@ifundefined{@chapter}{-}{%
15438   \let\Hy@org@chapter\@chapter
15439   \def\@chapter{%
15440     \def\Hy@next{%
15441       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15442       \Hy@raisedlink{%
15443         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15444       }%
15445     }%
15446     \ifnum\c@secnumdepth>\m@ne
15447       \ltx@ifundefined{if@mainmatter}%
15448       \iftrue{\csname if@mainmatter\endcsname}%
15449       \let\Hy@next\relax
15450     \fi
15451     \fi
15452     \Hy@next
15453     \Hy@org@chapter
15454   }%
15455 }

15456 \let\H@old@part\@part
15457 \begingroup\expandafter\expandafter\expandafter\endgroup
15458 \expandafter\ifx\csname chapter\endcsname\relax
15459   \let\Hy@secnum@part\z@
15460 \else
15461   \let\Hy@secnum@part\m@ne
15462 \fi
15463 \def\@part{%
15464   \ifnum\Hy@secnum@part>\c@secnumdepth
15465     \phantomsection
15466   \fi
15467   \H@old@part
15468 }

15469 \let\H@old@spart\@spart
15470 \def\@spart#1{%
15471   \Hy@MakeCurrentHrefAuto{part*}%
15472   \Hy@raisedlink{%
15473     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15474   }%

```

```

15475 \H@old@spart{#1}%
15476 }
15477 \let\H@old@sect\@sect
15478 \def\@sect#1#2#3#4#5#6[#7]#8{%
15479 \ifnum #2>\c@secnumdepth
15480 \expandafter\@firstoftwo
15481 \else
15482 \expandafter\@secondoftwo
15483 \fi
15484 {%
15485 \Hy@MakeCurrentHrefAuto{section*}%
15486 \setlength{\Hy@SectionHShift}{#3}%
15487 \begingroup
15488 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15489 \toks\tw@\expandafter{%
15490 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15491 #8%
15492 }%
15493 \edef\x{\endgroup
15494 \the\toks@\the\toks\tw@}%
15495 }\x
15496 }{%
15497 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15498 }%
15499 }

15500 </outlines | hypertex>
15501 <*outlines>

15502 \expandafter\def\csname Parent-4\endcsname{}
15503 \expandafter\def\csname Parent-3\endcsname{}
15504 \expandafter\def\csname Parent-2\endcsname{}
15505 \expandafter\def\csname Parent-1\endcsname{}
15506 \expandafter\def\csname Parent0\endcsname{}
15507 \expandafter\def\csname Parent1\endcsname{}
15508 \expandafter\def\csname Parent2\endcsname{}
15509 \expandafter\def\csname Parent3\endcsname{}
15510 \expandafter\def\csname Parent4\endcsname{}
15511 </outlines>

```

50 Compatibility with koma-script classes

```
15512 <*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.

```

15513 \def\Hy@tempa{%
15514 \def\@addchap[##1]##2{%
15515 \typeout{##2}%
15516 \if@twoside
15517 \@mkboth{##1}{}%
15518 \else
15519 \@mkboth{}{##1}%
15520 \fi
15521 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15522 \addtocontents{lot}{\protect\addvspace{10\p@}}%

```



```

15523 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15524 \Hy@raisedlink{%
15525   \hyper@anchorstart{\@currentHref}\hyper@anchorend
15526 }%
15527 \if@twocolumn
15528   \@topnewpage[\@makeschapterhead{##2}]%
15529 \else
15530   \@makeschapterhead{##2}%
15531   \@afterheading
15532 \fi
15533 \addcontentsline{toc}{chapter}{##1}%
15534 }%
15535 }
15536 \@ifclassloaded{scrbook}{%
15537   \@ifclasslater{scrbook}{2001/01/01}{%
15538     \let\Hy@tempa\@empty
15539   }{}%
15540 }{%
15541   \@ifclassloaded{scrreprt}{%
15542     \@ifclasslater{scrreprt}{2001/01/01}{%
15543       \let\Hy@tempa\@empty
15544     }{}%
15545   }{%
15546     \let\Hy@tempa\@empty
15547   }%
15548 }%
15549 \Hy@tempa
15550 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15551 <*pd1enc>
15552 \DeclareFontEncoding{PD1}{}{}

Accents
15553 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15554 \DeclareTextAccent{\'}{PD1}{\textacute}
15555 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15556 \DeclareTextAccent{\~}{PD1}{\texttilde}
15557 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15558 \DeclareTextAccent{\r}{PD1}{\textring}
15559 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15560 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15561 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15562 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15563 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15564 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15565 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15566 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15567 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15568 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15569 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}

```

```

15570 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textstring}
15571 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15572 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15573 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15574 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15575 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15576 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15577 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15578 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15579 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15580 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15581 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15582 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
15583 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15584 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15585 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15586 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15587 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15588 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15589 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}
15590 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}
15591 \DeclareTextCommand{\newtie}{PD1}[1]{%
15592   \TextSymbolUnavailable{\newtie{#1}}}{#1}%
15593 }

```

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

```

15594 % U+0009 (CHARACTER TABULATION)
15595 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15596 % U+000A (LINE FEED)
15597 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15598 % U+000D (CARRIAGE RETURN)
15599 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15600 % U+02D8 BREVE; breve
15601 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15602 % U+02C7 CARON; caron
15603 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15604 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15605 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15606 % U+02D9 DOT ABOVE; dotaccent
15607 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15608 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15609 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15610 % U+02DB OGONEK; ogonek
15611 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15612 % U+02DA RING ABOVE; ring
15613 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15614 % U+02DC SMALL TILDE; ilde, *tilde
15615 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

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

\041: U+0021 EXCLAMATION MARK; exclam

15616 % U+0022 QUOTATION MARK; quotedbl

15617 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022

15618 % U+0023 NUMBER SIGN; numbersign

15619 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

15620 % U+0024 DOLLAR SIGN; dollar

15621 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15622 % U+0025 PERCENT SIGN; percent
 15623 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15624 % U+0026 AMPERSAND; ampersand
 15625 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15626 % U+0028 LEFT PARENTHESIS; parenleft
 15627 \DeclareTextCommand{\textparenleft}{PD1}{\string\{ }% \050 U+0028
 15628 % U+0029 RIGHT PARENTHESIS; parenright
 15629 \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
 15630 % U+002E FULL STOP; period
 15631 \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
 15632 % U+003C LESS-THAN SIGN; less
 15633 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15634 % U+003E GREATER-THAN SIGN; greater
 15635 \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
 15636 % U+005C REVERSE SOLIDUS; backslash
 15637 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15638 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15639 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15640 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15641 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15642 % U+005F LOW LINE; underscore
 15643 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15644 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15645 % U+0060 GRAVE ACCENT; grave
 15646 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15647 % U+0069 LATIN SMALL LETTER I; i
 15648 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

\152: U+006A LATIN SMALL LETTER J; j

...

\172: U+007A LATIN SMALL LETTER Z; z

15649 % U+007B LEFT CURLY BRACKET; braceleft

15650 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B

15651 % U+007C VERTICAL LINE; *bar, verticalbar

15652 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C

15653 % U+007D RIGHT CURLY BRACKET; braceright

15654 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D

15655 % U+007E TILDE; asciitilde

15656 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E

Slot \177 (0x7F) is undefined in PDFDocEncoding.

15657 % U+2022 BULLET; bullet

15658 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022

15659 % U+2020 DAGGER; dagger

15660 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020

15661 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)

15662 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021

15663 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}

15664 % U+2026 HORIZONTAL ELLIPSIS; ellipsis

15665 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026

15666 % U+2014 EM DASH; emdash

15667 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014

15668 % U+2013 EN DASH; endash

15669 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013

15670 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

15671 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192

15672 % U+2044 FRACTION SLASH; fraction

15673 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044

15674 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-

ingleft

15675 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039

15676 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-

ingright

15677 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A

15678 % U+2212 MINUS SIGN; minus

15679 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212

15680 % U+2030 PER MILLE SIGN; perthousand

15681 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030

15682 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

15683 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E

15684 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft

15685 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C

15686 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright

15687 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D

15688 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft

15689 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

15690 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright

15691 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019

15692 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase

15693 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A

15694 % U+2122 TRADE MARK SIGN; trademark

15695 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122

15696 % U+FB01 LATIN SMALL LIGATURE FI; fi

15697 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01

15698 % U+FB02 LATIN SMALL LIGATURE FL; fl

15699 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02

15700 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15701 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15702 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15703 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15704 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15705 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15706 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15707 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15708 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15709 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15710 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15711 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15712 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15713 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15714 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15715 % U+0153 LATIN SMALL LIGATURE OE; oe
 15716 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15717 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15718 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15719 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15720 \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.
 15721 % U+20AC EURO SIGN; *Euro, euro
 15722 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15723 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15724 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15725 % U+00A2 CENT SIGN; cent
 15726 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15727 % U+00A3 POUND SIGN; sterling
 15728 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15729 % U+00A4 CURRENCY SIGN; currency
 15730 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15731 % U+00A5 YEN SIGN; yen
 15732 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15733 % U+00A6 BROKEN BAR; brokenbar
 15734 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15735 % U+00A7 SECTION SIGN; section
 15736 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15737 % U+00A8 DIAERESIS; dieresis
 15738 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15739 % U+00A9 COPYRIGHT SIGN; copyright
 15740 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15741 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15742 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15743 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15744 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15745 % U+00AC NOT SIGN; logicalnot
 15746 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15747 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15748 % U+00AE REGISTERED SIGN; registered
 15749 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15750 % U+00AF MACRON; *macron, overscore
 15751 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15752 % U+00B0 DEGREE SIGN; degree

15753 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15754 % U+00B1 PLUS-MINUS SIGN; plusminus
15755 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15756 % U+00B2 SUPERSCRIPT TWO; twosuperior
15757 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15758 % U+00B3 SUPERSCRIPT THREE; threesuperior
15759 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15760 % U+00B4 ACUTE ACCENT; acute
15761 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15762 % U+00B5 MICRO SIGN; mu, mu1
15763 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15764 % U+00B6 PILCROW SIGN; paragraph
15765 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15766 % U+00B7 MIDDLE DOT; middot, *periodcentered
15767 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15768 % U+00B8 CEDILLA; cedilla
15769 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15770 % U+00B9 SUPERSCRIPT ONE; onesuperior
15771 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15772 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15773 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15774 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15775 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15776 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15777 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15778 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15779 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15780 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15781 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15782 % U+00BF INVERTED QUESTION MARK; questiondown
15783 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15784 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15785 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15786 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15787 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15788 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15789 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15790 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15791 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15792 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15793 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
15794 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15795 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15796 % U+00C6 LATIN CAPITAL LETTER AE; AE
15797 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15798 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15799 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15800 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15801 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15802 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15803 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15804 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15805 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15806 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15807 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
15808 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave

15809 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15810 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15811 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15812 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15813 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15814 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15815 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15816 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15817 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15818 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15819 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15820 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15821 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15822 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15823 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15824 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15825 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15826 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15827 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15828 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15829 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15830 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15831 % U+00D7 MULTIPLICATION SIGN; multiply
15832 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15833 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15834 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15835 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15836 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15837 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15838 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15839 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15840 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15841 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15842 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15843 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15844 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15845 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15846 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15847 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15848 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15849 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15850 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15851 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15852 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15853 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15854 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15855 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15856 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15857 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15858 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15859 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15860 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15861 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15862 % U+00E6 LATIN SMALL LETTER AE; ae
15863 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15864 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15865 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7

15866 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15867 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15868 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15869 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15870 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15871 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15872 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15873 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15874 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15875 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15876 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15877 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15878 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15879 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15880 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15881 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15882 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15883 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15884 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15885 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15886 % U+00F0 LATIN SMALL LETTER ETH; eth
15887 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15888 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15889 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15890 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15891 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15892 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15893 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15894 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15895 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15896 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15897 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15898 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15899 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15900 % U+00F7 DIVISION SIGN; divide
15901 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15902 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15903 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15904 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15905 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15906 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15907 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15908 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15909 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15910 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15911 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15912 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15913 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15914 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15915 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15916 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15917 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15918 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15919 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
15920 \DeclareTextCommand{\SS}{PD1}{SS}%
15921 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

```

15922 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15923 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15924 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15925 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15926 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15927 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15928 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15929 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15930 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15931 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15932 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15933 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15934 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15935 \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).

```

15936 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15937 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15938 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15939 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15940 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15941 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15942 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15943 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15944 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15945 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15946 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15947 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15948 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15949 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

15950 `/pd1enc`)

51.2 PU encoding

```

15951 \*puenc)
15952 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15953 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15954 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15955 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15956 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15957 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15958 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15959 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15960 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15961 % U+0304 COMBINING MACRON; macroncmb
15962 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15963 % U+0306 COMBINING BREVE; brevecmb
15964 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15965 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15966 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15967 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15968 % U+0308 COMBINING DIAERESIS; dieresiscmb

```

15969 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 15970 % U+030A COMBINING RING ABOVE; ringcmb
 15971 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 15972 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 15973 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 15974 % U+030C COMBINING CARON; caroncmb
 15975 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 15976 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15977 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 15978 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 15979 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 15980 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 15981 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 15982 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 15983 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 15984 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 15985 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 15986 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 15987 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 15988 % U+0327 COMBINING CEDILLA; cedillacmb
 15989 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 15990 % U+0328 COMBINING OGONEK; ogonekcmb
 15991 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 15992 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 15993 % \textsubcircum (tipa)
 15994 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 15995 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 15996 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 15997 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 15998 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 15999 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16000 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 16001 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 16002 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 16003 % U+20DD COMBINING ENCLOSING CIRCLE
 16004 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16005 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 16006 \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.

16007 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
 16008 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
 16009 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
 16010 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 16011 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 16012 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 16013 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 16014 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 16015 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 16016 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 16017 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
 16018 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
 16019 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
 16020 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%

16021 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16022 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16023 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\{\texttringlew\}}%
16024 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\{\textcirc-
low\}}%
16025 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16026 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\{\texttildelow\}}%
16027 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\{\textmacronbelow\}}%
16028 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\{\textdotbelow\}}%
16029 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\{\texttie\}}%
16030 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\{\textnewtie\}}%
16031 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\{\textbigcircle\}}%
16032 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16033 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16034 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16035 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16036 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16037 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16038 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16039 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16040 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16041 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16042 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16043 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16044 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16045 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16046 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16047 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16048 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16049 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16050 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\{\texttringlew\}}%
16051 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\{\textcirc-
low\}}%
16052 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16053 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16054 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16055 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16056 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16057 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16058 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16059 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16060 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

16061 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16062 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16063 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16064 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
16065 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16066 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16067 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16068 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16069 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16070 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16071 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16072 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16073 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16074 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16075 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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

Special white space escape characters.

```
16076 % U+0009 (CHARACTER TABULATION)
16077 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16078 % U+000A (LINE FEED)
16079 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16080 % U+000D (CARRIAGE RETURN)
16081 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

16082 % U+0022 QUOTATION MARK; quotedbl
16083 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16084 % U+0023 NUMBER SIGN; numbersign
16085 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16086 % U+0024 DOLLAR SIGN; dollar
16087 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16088 %* \textdollar -> \mathdollar
16089 %* \textdollar -> \EyesDollar (marvosym)
16090 % U+0025 PERCENT SIGN; percent
16091 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16092 % U+0026 AMPERSAND; ampersand
16093 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16094 %* \textampersand -> \binampersand (stmaryrd)
16095 %* \textampersand -> \with (cmll)
16096 % U+0027 APOSTROPHE; quotesingle
16097 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16098 % U+0028 LEFT PARENTHESIS; parenleft
16099 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16100 % U+0029 RIGHT PARENTHESIS; parenright
16101 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16102 % U+002A ASTERISK; asterisk; (?)
16103 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16104 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16105 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16106 % U+002C COMMA; comma; \MVComma (marvosym)
16107 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16108 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16109 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16110 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16111 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16112 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16113 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16114 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16115 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16116 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16117 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16118 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16119 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16120 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16121 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16122 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
16123 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
16124 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
16125 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
16126 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16127 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
```

16128 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 16129 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 16130 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 16131 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 16132 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 16133 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 16134 % U+003C LESS-THAN SIGN; less
 16135 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 16136 % U+003E GREATER-THAN SIGN; greater
 16137 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 16138 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 16139 \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
 16140 % U+005C REVERSE SOLIDUS; backslash
 16141 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 16142 % U+005E CIRCUMFLEX ACCENT; asciicircum
 16143 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 16144 % U+005F LOW LINE; underscore
 16145 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 16146 %* \textunderscore -> \mathunderscore (LaTeX)
 16147 % U+0060 GRAVE ACCENT; grave
 16148 \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
 16149 % U+0069 LATIN SMALL LETTER I; i
 16150 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069
 16151 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 16152 % U+007B LEFT CURLY BRACKET; braceleft
 16153 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 16154 % U+007C VERTICAL LINE; *bar, verticalbar
 16155 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 16156 %* \textbar -> \textvertline (tipa)
 16157 % U+007D RIGHT CURLY BRACKET; braceright
 16158 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 16159 % U+007E TILDE; asciitilde
 16160 \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

16161 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
16162 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
16163 % U+00A2 CENT SIGN; cent
16164 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
16165 % U+00A3 POUND SIGN; sterling
16166 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
16167 %* \textsterling -> \mathsterling (LaTeX)
16168 %* \textsterling -> \pounds (LaTeX)
16169 % U+00A4 CURRENCY SIGN; currency
16170 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
16171 % U+00A5 YEN SIGN; yen
16172 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
16173 % U+00A6 BROKEN BAR; brokenbar
16174 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
16175 %* \textbrokenbar -> \brokenvert (wasysym)
16176 % U+00A7 SECTION SIGN; section
16177 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
16178 %* \textsection -> \mathsection (LaTeX)
16179 %* \textsection -> \S (LaTeX)
16180 % U+00A8 DIAERESIS; dieresis
16181 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
16182 % U+00A9 COPYRIGHT SIGN; copyright
16183 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
16184 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
16185 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
16186 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
16187 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
16188 % U+00AC NOT SIGN; logicalnot
16189 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
16190 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
16191 % U+00AE REGISTERED SIGN; registered
16192 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16193 % U+00AF MACRON; *macron, overscore
16194 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16195 % U+00B0 DEGREE SIGN; degree
16196 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16197 % U+00B1 PLUS-MINUS SIGN; plusminus
16198 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16199 % U+00B2 SUPERScript TWO; twosuperior
16200 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16201 % U+00B3 SUPERScript THREE; threesuperior
16202 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16203 % U+00B4 ACUTE ACCENT; acute
16204 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16205 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16206 % U+00B5 MICRO SIGN; mu, mul
16207 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16208 % U+00B6 PILCROW SIGN; paragraph
16209 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16210 %* \textparagraph -> \mathparagraph (LaTeX)
16211 % U+00B7 MIDDLE DOT; middot, *periodcentered
16212 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16213 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16214 %* \textperiodcentered -> \Squaredot (marvosym)
16215 % U+00B8 CEDILLA; cedilla

16216 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16217 % U+00B9 SUPERSCRIPT ONE; onesuperior
16218 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16219 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16220 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16221 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
16222 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16223 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16224 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16225 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16226 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16227 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16228 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16229 % U+00BF INVERTED QUESTION MARK; questiondown
16230 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16231 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16232 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16233 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16234 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16235 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16236 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16237 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16238 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16239 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16240 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16241 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16242 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16243 % U+00C6 LATIN CAPITAL LETTER AE; AE
16244 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16245 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16246 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16247 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16248 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16249 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16250 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16251 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16252 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16253 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16254 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16255 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16256 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16257 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16258 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16259 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16260 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16261 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16262 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16263 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16264 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16265 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16266 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16267 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16268 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16269 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16270 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16271 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex

16272 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
16273 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16274 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16275 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16276 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16277 % U+00D7 MULTIPLICATION SIGN; multiply
16278 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16279 %* \textmultiply -> \vartimes (stmaryrd)
16280 %* \textmultiply -> \MVMultiplication (marvosym)
16281 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16282 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16283 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16284 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16285 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16286 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16287 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16288 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16289 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16290 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16291 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16292 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16293 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16294 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16295 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16296 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16297 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16298 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16299 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
16300 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16301 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16302 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16303 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16304 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16305 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16306 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16307 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16308 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16309 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16310 % U+00E6 LATIN SMALL LETTER AE; ae
16311 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16312 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16313 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16314 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16315 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
16316 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16317 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16318 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16319 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16320 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16321 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16322 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16323 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16324 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16325 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16326 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16327 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16328 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

16329 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
 16330 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 16331 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 16332 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 16333 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 16334 % U+00F0 LATIN SMALL LETTER ETH; eth
 16335 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 16336 %* \dh -> \eth (wsuipa, phonetic)
 16337 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 16338 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 16339 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 16340 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 16341 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16342 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 16343 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16344 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 16345 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16346 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 16347 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16348 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16349 % U+00F7 DIVISION SIGN; divide
 16350 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16351 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16352 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16353 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16354 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16355 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16356 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16357 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16358 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16359 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16360 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16361 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16362 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16363 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16364 % \th, \thorn (wasysym), \textthorn (tipa)
 16365 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16366 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16367 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16368 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16369 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16370 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16371 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16372 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16373 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16374 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16375 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16376 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16377 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16378 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16379 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16380 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16381 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 16382 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106

16383 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16384 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16385 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16386 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16387 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16388 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16389 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
16390 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16391 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16392 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16393 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16394 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16395 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16396 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16397 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16398 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16399 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16400 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16401 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16402 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16403 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16404 % \textcrd (tipa)
16405 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16406 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16407 %* \textcrd -> \crossd (wsuipa)
16408 % An alternate glyph with the stroke through the bowl:
16409 %* \textcrd -> \textbard (tipa)
16410 %* \textcrd -> \bard (wsuipa)
16411 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16412 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16413 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16414 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16415 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16416 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16417 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16418 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16419 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16420 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16421 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16422 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16423 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16424 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16425 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16426 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16427 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16428 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16429 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16430 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16431 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16432 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16433 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16434 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16435 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16436 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16437 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16438 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F

16439 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16440 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16441 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16442 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16443 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16444 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16445 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16446 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16447 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16448 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16449 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16450 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16451 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16452 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16453 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AMS)
16454 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16455 %* \texthbar -> \textcrh (tipa)
16456 %* \texthbar -> \crossh (wsuipa)
16457 %* \texthbar -> \planck (phonetic)
16458 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16459 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16460 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16461 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16462 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16463 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16464 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16465 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16466 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16467 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16468 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16469 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16470 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16471 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16472 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16473 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16474 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16475 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16476 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16477 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16478 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16479 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16480 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16481 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16482 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16483 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16484 % U+0133 LATIN SMALL LIGATURE IJ; ij
16485 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16486 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16487 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16488 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16489 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16490 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16491 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
16492 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136

16493 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 16494 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

16495 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 16496 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 16497 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16498 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16499 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16500 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16501 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 16502 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16503 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16504 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16505 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16506 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16507 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16508 \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`.

16509 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 16510 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16511 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16512 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16513 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16514 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16515 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16516 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16517 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16518 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16519 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16520 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16521 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 16522 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16523 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16524 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16525 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16526 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16527 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16528 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16529 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 16530 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16531 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16532 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16533 % U+014B LATIN SMALL LETTER ENG; eng
 16534 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16535 %* \ng -> \eng (wsuipa)
 16536 %* \ng -> \engma (phonetic)
 16537 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16538 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

16539 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
16540 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
16541 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
16542 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
16543 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
16544 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
16545 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
16546 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
16547 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
16548 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
16549 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16550 \DeclareTextCompositeCommand{\OE}{PU}{\81\122}% U+0152
16551 % U+0153 LATIN SMALL LIGATURE OE; oe
16552 \DeclareTextCompositeCommand{\oe}{PU}{\81\123}% U+0153
16553 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16554 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
16555 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16556 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
16557 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
16558 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
16559 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16560 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
16561 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16562 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
16563 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16564 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
16565 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16566 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
16567 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16568 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
16569 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16570 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
16571 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16572 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
16573 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16574 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16575 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16576 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16577 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16578 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16579 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16580 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16581 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
16582 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16583 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16584 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16585 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16586 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16587 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16588 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16589 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16590 \DeclareTextCompositeCommand{\textTslash}{PU}{\81\146}% U+0166
16591 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar

16592 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 16593 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 16594 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16595 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16596 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16597 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 16598 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 16599 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16600 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16601 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16602 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16603 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16604 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16605 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16606 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16607 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16608 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16609 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
 cute, Uhungarumlaut
 16610 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16611 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
 cute, uhungarumlaut
 16612 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16613 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16614 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16615 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16616 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16617 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16618 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16619 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16620 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16621 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16622 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16623 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16624 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16625 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16626 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16627 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16628 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16629 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16630 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16631 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16632 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16633 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16634 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16635 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16636 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16637 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16638 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16639 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16640 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16641 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16642 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16643 %* \textcrb -> \crossb (wsuipa)
 16644 % An alternate glyph with the stroke through the bowl:

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16645 %* \textcrb -> \textbarb (tipa)
16646 %* \textcrb -> \barb (wsuipa)
16647 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
      netic)
16648 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16649 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16650 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16651 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
      netic)
16652 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16653 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
16654 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
16655 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16656 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16657 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16658 %* \textflorin -> \Florin (marvosym)
16659 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16660 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16661 %* \texthvlig -> \hv (wsuipa)
16662 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
      netic)
16663 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16664 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16665 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16666 %* \texthtk -> \hausak (phonetic)
16667 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16668 % \textbarl (tipa), \barl (wsuipa)
16669 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16670 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16671 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16672 % \textcrlambda (tipa)
16673 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16674 %* \textcrlambda -> \crossnilambda (wsuipa)
16675 %* \textcrlambda -> \barlambda (phonetic)
16676 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16677 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16678 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
      long;
16679 % \textnrleg (tipx)
16680 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16681 %* \textPUnrleg -> \textnrleg (tipx)
16682 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16683 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16684 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16685 % \textlhookt (tipa)
16686 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16687 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16688 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16689 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16690 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16691 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16692 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16693 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16694 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16695 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16696 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16697 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)

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16698 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 16699 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
 tal;
 16700 % \textpipe (tipa)
 16701 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 16702 %* \textpipe -> \textpipevar (tipx)
 16703 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 16704 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 16705 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 16706 %* \textdoublepipe -> \textdoublepipevar (tipx)
 16707 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
 BLE BAR;
 16708 % clickalveolar; \textdoublebarpipe (tipa)
 16709 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 16710 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 16711 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 16712 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 16713 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
 16714 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 16715 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 16716 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 16717 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
 16718 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16719 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16720 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 16721 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 16722 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
 16723 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 16724 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 16725 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 16726 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
 16727 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 16728 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
 16729 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
 16730 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 16731 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 16732 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 16733 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 16734 %* \textgslash -> \textcrg (tipa)
 16735 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 16736 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 16737 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
 16738 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 16739 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 16740 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 16741 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
 16742 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 16743 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 16744 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 16745 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 16746 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 16747 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcarón
 16748 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 16749 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 16750 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 16751 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 16752 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute

16753 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16754 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16755 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16756 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16757 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16758 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16759 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16760 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16761 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16762 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16763 % *Oslashacute, Ostrokeacut
16764 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16765 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16766 % *oslashacute, ostrokeacute
16767 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16768 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16769 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16770 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16771 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16772 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16773 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16774 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16775 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16776 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16777 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16778 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16779 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16780 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16781 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16782 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16783 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16784 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16785 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16786 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16787 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16788 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16789 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16790 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16791 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16792 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16793 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16794 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16795 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16796 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16797 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16798 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16799 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16800 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16801 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16802 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16803 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214

16804 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16805 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16806 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16807 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16808 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16809 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16810 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16811 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16812 % U+021F LATIN SMALL LETTER H WITH CARON
 16813 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16814 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16815 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16816 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16817 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16818 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16819 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16820 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16821 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16822 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16823 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16824 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16825 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16826 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16827 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16828 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16829 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16830 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16831 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16832 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16833 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16834 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16835 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16836 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16837 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16838 % U+0237 LATIN SMALL LETTER DOTLESS J
 16839 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16840 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16841 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16842 %* \textPUdblig -> \textdblig (tipx)
 16843 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16844 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16845 %* \textPUqplig -> \textqplig (tipx)
 16846 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16847 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16848 %* \textslashc -> \textcentoldstyle (textcomp)
 16849 % With bar instead of stroke:
 16850 %* \textslashc -> \textbarc (tipa)

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

16851 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16852 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16853 %* \textturna -> \inva (wasysym)
 16854 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16855 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16856 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251

16857 %* \textscripta -> \vara (phonetic)
 16858 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16859 % \textturnscripta (tipa)
 16860 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16861 %* \textturnscripta -> \invscripta (wsuipa)
 16862 %* \textturnscripta -> \rotvara (phonetic)
 16863 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16864 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16865 %* \texthtb -> \hookb (wsuipa)
 16866 %* \texthtb -> \hausab (phonetic)
 16867 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16868 % \textopeno (tipa), \openo (wasysym)
 16869 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16870 %* \textopeno -> \varopeno (phonetic)
 16871 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16872 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16873 %* \textctc -> \curlyc (wsuipa)
 16874 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16875 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16876 %* \textrtaild -> \taild (wsuipa)
 16877 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16878 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16879 %* \texthtd -> \hookd (wsuipa)
 16880 %* \texthtd -> \hausad (phonetic)
 16881 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16882 % \textreve (tipa), \reve (wsuipa)
 16883 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16884 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16885 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16886 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16887 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16888 % \textrhookschwa (tipa)
 16889 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16890 %* \textrhookschwa -> \er (wsuipa)
 16891 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16892 % \niepsilon (wsuipa)
 16893 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16894 %* \textniepsilon -> \epsi (phonetic)
 16895 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16896 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16897 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16898 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16899 % \textrhookrevepsilon (tipa)
 16900 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
 16901 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16902 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16903 % \textcloserevepsilon (tipa)
 16904 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16905 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16906 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16907 % \textbardotlessj (tipa)
 16908 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16909 %* \textbardotlessj -> \barj (phonetic)

16910 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16911 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16912 %* \texthtg -> \hookg (wsuipa)
16913 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16914 % \textscriptg (tipa), \scriptg (wsuipa)
16915 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16916 %* \textscriptg -> \varg (phonetic)
16917 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16918 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16919 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16920 % \ipagamma (wsuipa), \vod (phonetic)
16921 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16922 %* \textipagamma -> \vod (pnonetic)
16923 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16924 % \babygamma (wsuipa)
16925 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16926 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16927 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16928 %* \textturnh -> \invh (wsuipa)
16929 %* \textturnh -> \udesc (phonetic)
16930 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16931 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16932 %* \texthth -> \hookh (wsuipa)
16933 %* \texthth -> \voicedh (phonetic)
16934 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16935 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16936 %* \texththeng -> \hookheng (wsuipa)
16937 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16938 % \textbari (tipa), \bari (wsuipa)
16939 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16940 %* \textbari -> \ibar (phonetic)
16941 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16942 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16943 %* \textniiota -> \vari (phonetic)
16944 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16945 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16946 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16947 % \textltilde (tipa)
16948 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16949 %* \textltilde -> \tildel (wsuipa)
16950 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16951 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16952 %* \textbeltl -> \latfrie (wsuipa)
16953 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16954 % \hookretroflex; \textrtaill (tipa)
16955 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16956 %* \textrtaill -> \taill (wsuipa)
16957 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16958 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16959 %* \textlyoghlig -> \lz (wsuipa)
16960 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16961 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16962 %* \textturnm -> \invm (wsuipa)
16963 %* \textturnm -> \rotm (phonetic)
16964 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;

16965 % \textturnmrlleg (tipa)
16966 \DeclareTextCommand{\textturnmrlleg}{PU}{\82\160}% U+0270
16967 %* \textturnmrlleg -> \legm (wsuipa)
16968 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16969 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16970 %* \textltailm -> \labdentalnas (wsuipa)
16971 %* \textltailm -> \emgma (phonetic)
16972 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
16973 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16974 %* \textltailn -> \nj (wsuipa)
16975 %* \textltailn -> \nya (phonetic)
16976 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16977 % nhookretroflex; \textrtailn (tipa)
16978 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16979 %* \textrtailn -> \tailn (wsuipa)
16980 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16981 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16982 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16983 % LATIN CAPITAL LETTER BARRED O; obarred;
16984 % \textbaro (tipa), \baro (wsuipa)
16985 % But \baro from stmaryrd is different!
16986 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16987 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16988 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16989 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16990 % \textcloseomega (tipa)
16991 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16992 %* \textcloseomega -> \closedniomega (wsuipa)
16993 %* \textcloseomega -> \varomega (phonetic)
16994 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
16995 \DeclareTextCommand{\textniph}{PU}{\82\170}%* U+0278
16996 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16997 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16998 %* \textturnr -> \invr (wsuipa)
16999 %* \textturnr -> \rotr (phonetic)
17000 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17001 % rlonglegturned; \textturnlongleg (tipa)
17002 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17003 %* \textturnlongleg -> \invleg (wsuipa)
17004 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
17005 % \textturnrrtail (tipa)
17006 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17007 %* \textturnrrtail -> \tailinvr (wsuipa)
17008 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
17009 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
17010 %* \textlongleg -> \leg (wsuipa)
17011 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
17012 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17013 %* \textrtailr -> \tailr (wsuipa)
17014 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17015 % \textfishhookr (tipa)
17016 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17017 %* \textfishhookr -> \flapr (wsuipa)
17018 %* \textfishhookr -> \flap (phonetic)
17019 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfish-

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hookreversed;
17020 % \textlhtlongi (tipa)
17021 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17022 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17023 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17024 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17025 % \textinvscr (tipa), \invscr (wsuipa)
17026 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17027 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17028 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17029 %* \textrtails -> \tails (wsuipa)
17030 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17031 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17032 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17033 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17034 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17035 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatere-
reversed;
17036 % \textvibyi (tipa)
17037 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17038 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17039 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17040 %* \textctesh -> \curlyesh (wsuipa)
17041 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17042 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17043 %* \textturnt -> \clickt (wsuipa)
17044 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
17045 % \textrtailt (tipa)
17046 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17047 %* \textrtailt -> \tailt (wsuipa)
17048 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17049 % \textbaru (tipa), \baru (wsuipa)
17050 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17051 %* \textbaru -> \ubar (phonetic)
17052 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17053 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17054 %* \textniupsilon -> \rotOmega (phonetic)
17055 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
17056 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17057 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17058 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17059 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17060 %* \textturnv -> \invv (wsuipa)
17061 %* \textturnv -> \pwedge (phonetic)
17062 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17063 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17064 %* \textturnw -> \invw (wsuipa)
17065 %* \textturnw -> \rotw (phonetic)
17066 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17067 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17068 %* \textturny -> \invy (wsuipa)
17069 %* \textturny -> \roty (phonetic)
17070 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17071 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17072 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-

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hook;
17073 % \texttrtailz (tipa)
17074 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
17075 %* \texttrtailz -> \tailz (wsuipa)
17076 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17077 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17078 %* \textctz -> \curlyz (wsuipa)
17079 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17080 % \textyogh (tipa), \yogh (wsuipa)
17081 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17082 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LET-
TER YOGH CURL;
17083 % ezhcurl; \textctyogh (tipa)
17084 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17085 %* \textctyogh -> \curlyyogh (wsuipa)
17086 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17087 % \textglotstop (tipa), \glotstop (wsuipa)
17088 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17089 %* \textglotstop -> \ejective (wsuipa)
17090 %* \textglotstop -> \glottal (phonetic)
17091 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17092 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17093 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17094 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17095 %* \textrevglotstop -> \rejeject (wsuipa)
17096 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17097 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17098 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17099 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17100 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17101 %* \textstretchc -> \clickc (wsuipa)
17102 %* \textstretchc -> \textstretchcvar (tipx)
17103 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17104 % \textbullseye (tipa)
17105 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17106 %* \textbullseye -> \clickb (wsuipa)
17107 %* \textbullseye -> \textObullseye (tipx)
17108 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17109 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17110 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17111 % \textcloseepsilon (tipa)
17112 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17113 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17114 % \texthtscg (tipa)
17115 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17116 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17117 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17118 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
tail; \textcdj (tipa)
17119 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17120 %* \textctj -> \textctjvar (tipx)
17121 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17122 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17123 %* \textturnk -> \textturnsck (tipx)
17124 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17125 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17126 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)

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17127 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 17128 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-stroke;
 17129 % \textbarglotstop (tipa)
 17130 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 17131 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 17132 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;
 17133 % \textbarrevglotstop (tipa)
 17134 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17135 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17136 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17137 %* \textdzlig -> \dz (wsupipa)
 17138 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 17139 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17140 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17141 % \textdctzlig (tipa)
 17142 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17143 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17144 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17145 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 17146 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 17147 %* \textteshlig -> \tesh (wsuipa)
 17148 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17149 % \texttctclig (tipa)
 17150 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17151 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17152 % \textlhtlongy (tipa)
 17153 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17154 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17155 % \textvibyy (tipa)
 17156 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

17157 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17158 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17159 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17160 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17161 % \textraiseglotstop (tipa)
 17162 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17163 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17164 % \textlptr (tipa)
 17165 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17166 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17167 % \textrptr (tipa)
 17168 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 17169 % U+02C7 CARON; caron
 17170 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17171 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17172 % \textprimstress (tipa)
 17173 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17174 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17175 % \textsecstress (tipa)
 17176 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17177 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17178 % \textlengthmark (tipa)

17179 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17180 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 17181 % \texthalflength (tipa)
 17182 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17183 % U+02D8 BREVE; breve
 17184 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17185 % U+02D9 DOT ABOVE; dotaccent
 17186 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17187 % U+02DA RING ABOVE; ring
 17188 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17189 % U+02DB OGONEK; ogonek
 17190 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17191 % U+02DC SMALL TILDE; ilde, *tilde
 17192 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17193 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17194 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17195 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17196 % U+02F3 MODIFIER LETTER LOW RING
 17197 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17198 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17199 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17200 % U+02F7 MODIFIER LETTER LOW TILDE
 17201 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17202 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17203 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17204 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17205 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

17206 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravemcmb
 17207 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17208 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17209 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17210 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17211 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17212 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17213 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17214 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 17215 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

17216 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17217 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17218 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17219 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17220 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 17221 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17222 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17223 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17224 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17225 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17226 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17227 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17228 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 crintonos

17229 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17230 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilon-tonos
17231 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17232 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17233 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17234 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17235 % \iotaadieresis-tonos
17236 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
17237 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17238 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17239 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17240 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17241 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17242 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17243 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
17244 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17245 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17246 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17247 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17248 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17249 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17250 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17251 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17252 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17253 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17254 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17255 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17256 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17257 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17258 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17259 % U+039C GREEK CAPITAL LETTER MU; Mu
17260 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17261 % U+039D GREEK CAPITAL LETTER NU; Nu
17262 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17263 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17264 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17265 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17266 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17267 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17268 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17269 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17270 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17271 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17272 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17273 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17274 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17275 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17276 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17277 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17278 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17279 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17280 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17281 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17282 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17283 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omega; \Omega (LaTeX)
17284 % \Omega (LaTeX)

17285 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17286 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17287 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17288 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17289 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
17290 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17291 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17292 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17293 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
17294 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17295 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17296 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17297 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17298 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17299 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17300 % AND TONOS; upsilondieresis
17301 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
17302 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17303 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17304 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17305 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17306 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17307 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17308 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17309 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17310 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17311 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17312 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17313 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17314 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17315 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17316 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17317 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17318 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17319 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17320 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17321 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17322 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17323 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17324 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17325 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17326 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17327 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17328 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17329 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17330 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17331 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17332 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17333 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17334 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17335 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17336 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17337 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17338 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17339 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17340 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)

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17341 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17342 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17343 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17344 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17345 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17346 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17347 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17348 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17349 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17350 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17351 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17352 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17353 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17354 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
17355 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17356 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17357 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17358 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17359 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17360 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17361 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17362 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17363 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17364 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17365 % U+03DB GREEK SMALL LETTER STIGMA
17366 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17367 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17368 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17369 % U+03DD GREEK SMALL LETTER DIGAMMA
17370 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17371 %* \textdigammagreek -> \digamma (AmS)
17372 % U+03DE GREEK LETTER KOPPA; Koppagreek
17373 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17374 % U+03DF GREEK SMALL LETTER KOPPA
17375 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17376 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17377 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17378 % U+03E1 GREEK SMALL LETTER SAMPI
17379 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17380 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17381 % \backepsilon (AmS)
17382 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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17383 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17384 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\000}% U+0400
17385 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
17386 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17387 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17388 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17389 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17390 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17391 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
17392 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053

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17393 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17394 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17395 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17396 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17397 % Icyrillic, *afii10055
17398 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17399 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17400 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17401 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
17402 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17403 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17404 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17405 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17406 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17407 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17408 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17409 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17410 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17411 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C
17412 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17413 \DeclareTextCompositeCommand{`}{PU}{\CYRI}{\84\015}% U+040D
17414 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17415 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17416 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17417 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17418 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17419 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17420 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17421 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17422 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17423 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17424 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17425 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17426 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17427 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17428 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17429 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17430 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17431 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17432 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17433 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17434 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17435 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17436 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17437 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17438 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17439 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17440 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17441 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17442 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17443 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17444 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17445 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17446 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17447 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17448 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17449 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E

17450 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17451 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17452 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17453 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17454 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17455 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17456 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17457 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17458 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17459 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17460 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17461 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17462 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17463 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17464 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17465 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17466 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17467 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17468 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17469 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17470 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17471 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17472 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17473 % Hardsigncyrillic, *afii10044
17474 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17475 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17476 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17477 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17478 % Softsigncyrillic, *afii10046
17479 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17480 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17481 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17482 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17483 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17484 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17485 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17486 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17487 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17488 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17489 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17490 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17491 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17492 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17493 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17494 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17495 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17496 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17497 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17498 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17499 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17500 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17501 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17502 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17503 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17504 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17505 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17506 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439

17507 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17508 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17509 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17510 \DeclareTextCommand{\cyl}{PU}{\84\073}% U+043B
17511 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17512 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17513 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17514 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17515 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17516 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17517 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17518 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17519 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17520 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17521 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17522 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17523 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17524 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17525 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17526 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17527 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17528 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17529 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17530 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17531 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17532 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17533 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17534 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17535 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17536 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17537 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17538 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17539 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyril-
lic
17540 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
17541 %* \cyrhdsn -> \hardsign (tipa)
17542 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17543 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
17544 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17545 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
17546 %* \cyrsftsn -> \softsign (tipa)
17547 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17548 \DeclareTextCommand{\cyrrev}{PU}{\84\115}% U+044D
17549 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17550 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17551 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17552 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17553 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17554 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17555 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17556 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17557 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\121}% U+0451
17558 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17559 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17560 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17561 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17562 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic

17563 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17564 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17565 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17566 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17567 % *afii10103, icyrillic
17568 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17569 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17570 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17571 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
17572 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17573 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17574 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17575 \DeclareTextCommand{\cylje}{PU}{\84\131}% U+0459
17576 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17577 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17578 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17579 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17580 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17581 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
17582 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17583 \DeclareTextCompositeCommand{`}{PU}{\cyri}{\84\135}% U+045D
17584 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17585 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17586 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17587 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17588 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17589 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17590 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17591 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17592 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17593 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17594 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17595 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17596 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17597 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17598 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17599 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17600 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17601 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17602 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17603 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17604 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17605 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17606 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17607 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17608 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17609 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17610 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17611 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17612 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17613 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17614 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17615 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic

17616 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17617 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17618 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17619 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17620 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17621 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17622 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17623 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17624 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17625 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17626 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17627 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17628 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17629 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17630 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17631 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17632 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17633 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17634 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17635 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17636 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17637 % GRAVE ACCENT; izhitsadblgravecyrillic
 17638 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17639 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17640 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17641 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17642 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17643 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17644 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17645 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17646 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17647 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17648 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17649 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17650 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17651 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17652 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17653 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17654 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17655 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17656 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17657 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17658 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17659 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17660 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE

\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17661 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17662 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17663 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17664 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17665 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17666 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17667 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17668 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17669 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17670 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17671 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17672 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17673 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17674 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17675 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17676 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17677 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17678 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17679 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17680 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17681 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17682 % Ghemiddlehookcyrillic
 17683 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17684 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17685 % ghemiddlehookcyrillic
 17686 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17687 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17688 % Zhedescendercyrillic
 17689 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17690 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17691 % zhedescendercyrillic
 17692 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17693 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17694 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17695 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17696 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17697 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17698 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17699 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17700 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17701 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17702 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17703 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17704 % Kavertikalstrokecyrillic
 17705 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17706 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17707 % kavertikalstrokecyrillic
 17708 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17709 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17710 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17711 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17712 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 17713 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17714 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17715 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17716 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17717 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 17718 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17719 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 17720 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17721 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17722 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17723 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17724 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17725 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 17726 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17727 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 17728 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17729 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 17730 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17731 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17732 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17733 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 17734 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17735 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17736 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
 cyrillic
 17737 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17738 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 17739 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 17740 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17741 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
 dercyrillic
 17742 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 17743 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17744 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17745 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17746 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17747 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 17748 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17749 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 17750 \DeclareTextCommand{\cyr yhcrs}{PU}{\84\261}% U+04B1
 17751 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
 dercyrillic
 17752 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 17753 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-

dercyrillic
 17754 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17755 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17756 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17757 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17758 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17759 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17760 % Chedescendercyrillic
 17761 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17762 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 17763 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 17764 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17765 % Cheverticalstrokecyrillic
 17766 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17767 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17768 % cheverticalstrokecyrillic
 17769 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17770 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17771 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17772 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17773 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17774 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 17775 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17776 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 17777 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17778 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 17779 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17780 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17781 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17782 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17783 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17784 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17785 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17786 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17787 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17788 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17789 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17790 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17791 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17792 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17793 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17794 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17795 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17796 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17797 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17798 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17799 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17800 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17801 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17802 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17803 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB

17804 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 17805 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17806 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17807 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17808 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17809 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17810 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17811 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17812 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17813 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17814 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 17815 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17816 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17817 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17818 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17819 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17820 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17821 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17822 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17823 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17824 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17825 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17826 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17827 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17828 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17829 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 17830 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17831 % Schwadiescyrillic
 17832 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17833 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17834 % schwadiescyrillic
 17835 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
 17836 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
 17837 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17838 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 17839 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17840 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 17841 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 17842 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 17843 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 17844 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 17845 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17846 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 17847 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17848 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 17849 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2
 17850 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 17851 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\343}% U+04E3

17852 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 17853 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 17854 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 17855 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 17856 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 17857 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 17858 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 17859 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 17860 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 17861 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 17862 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 17863 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17864 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17865 % Obarreddieresiscyrillic
 17866 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17867 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17868 % obarreddieresiscyrillic
 17869 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17870 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17871 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17872 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17873 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17874 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 17875 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 17876 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 17877 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 17878 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 17879 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17880 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 17881 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17882 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 17883 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
 17884 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 17885 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
 17886 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 17887 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 17888 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 17889 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 17890 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17891 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17892 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17893 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17894 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 17895 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 17896 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 17897 \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

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17898 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17899 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17900 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17901 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE
```

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

```
17902 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17903 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17904 % U+05D0 HEBREW LETTER ALEF
17905 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17906 % U+05D1 HEBREW LETTER BET
17907 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17908 % U+05D2 HEBREW LETTER GIMEL
17909 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17910 % U+05D3 HEBREW LETTER DALET
17911 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17912 % U+05D4 HEBREW LETTER HE
17913 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17914 % U+05D5 HEBREW LETTER VAV
17915 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17916 % U+05D6 HEBREW LETTER ZAYIN
17917 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17918 % U+05D7 HEBREW LETTER HET
17919 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
17920 % U+05D8 HEBREW LETTER TET
17921 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17922 % U+05D9 HEBREW LETTER YOD
17923 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17924 % U+05DA HEBREW LETTER FINAL KAF
17925 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17926 % U+05DB HEBREW LETTER KAF
17927 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
17928 % U+05DC HEBREW LETTER LAMED
17929 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17930 % U+05DD HEBREW LETTER FINAL MEM
17931 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17932 % U+05DE HEBREW LETTER MEM
17933 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
17934 % U+05DF HEBREW LETTER FINAL NUN
17935 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17936 % U+05E0 HEBREW LETTER NUN
17937 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17938 % U+05E1 HEBREW LETTER SAMEKH
17939 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17940 % U+05E2 HEBREW LETTER AYIN
17941 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17942 % U+05E3 HEBREW LETTER FINAL PE
17943 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
17944 % U+05E4 HEBREW LETTER PE
17945 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
17946 % U+05E5 HEBREW LETTER FINAL TSADI
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17947 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17948 % U+05E6 HEBREW LETTER TSADI
 17949 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17950 % U+05E7 HEBREW LETTER QOF
 17951 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17952 % U+05E8 HEBREW LETTER RESH
 17953 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17954 % U+05E9 HEBREW LETTER SHIN
 17955 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17956 %* \hebshin -> \hebsin (he8)
 17957 % U+05EA HEBREW LETTER TAV
 17958 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17959 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17960 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17961 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17962 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17963 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17964 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17965 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17966 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17967 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17968 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 17969 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17970 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17971 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 17972 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 17973 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 17974 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 17975 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17976 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17977 %* \textPUscK -> \textscK (tipx)
 17978 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 17979 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 17980 %* \textPUscM -> \textscM (tipx)
 17981 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17982 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17983 %* \textPUscP -> \textscP (tipx)
 17984 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17985 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17986 %* \textPUrevscr -> \textrevscr (tipx)
 17987 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 17988 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
 17989 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17990 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17991 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17992 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17993 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17994 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17995 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17996 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17997 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17998 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66

17999 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18000 \DeclareTextCommand{\textgammmaininferior}{PU}{\9035\147}%* U+1D67
 18001 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18002 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18003 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18004 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18005 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18006 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18007 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18008 % \barsci (wsuipa)
 18009 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18010 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18011 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18012 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18013 % \barscu (wsuipa)
 18014 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18015 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18016 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18017 %* \textPURhooka -> \textrhooka (tipx)
 18018 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18019 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18020 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18021 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18022 %* \textPURhooke -> \textrhooke (tipx)
 18023 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18024 % \textrhookepsilon (tipx)
 18025 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18026 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18027 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18028 % \textrhookopeno (tipx)
 18029 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18030 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18031 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18032 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18033 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 18034 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 18035 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 18036 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 18037 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 18038 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 18039 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 18040 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 18041 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 18042 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 18043 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 18044 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 18045 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 18046 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 18047 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 18048 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A

18049 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 18050 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 18051 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 18052 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 18053 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 18054 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 18055 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 18056 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 18057 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 18058 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 18059 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 18060 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 18061 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 18062 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 18063 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
 cumflexbelow
 18064 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 18065 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
 cumflexbelow
 18066 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
 18067 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
 18068 % Emacrongrave
 18069 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
 18070 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
 18071 % emacrongrave
 18072 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
 18073 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
 18074 % Emacronacute
 18075 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
 18076 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
 18077 % emacronacute
 18078 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
 18079 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
 cumflexbelow
 18080 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
 18081 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
 cumflexbelow
 18082 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
 18083 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
 18084 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
 18085 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
 18086 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
 18087 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 18088 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 18089 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 18090 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 18091 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 18092 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 18093 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 18094 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 18095 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 18096 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 18097 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 18098 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 18099 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
 18100 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
 18101 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow

18102 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18103 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18104 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18105 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18106 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18107 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18108 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18109 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18110 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18111 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18112 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18113 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18114 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18115 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18116 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18117 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18118 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18119 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18120 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18121 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18122 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18123 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18124 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18125 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18126 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18127 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18128 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18129 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18130 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18131 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18132 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18133 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18134 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18135 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18136 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18137 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18138 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18139 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18140 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18141 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
18142 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
18143 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18144 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18145 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18146 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18147 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18148 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18149 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18150 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18151 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18152 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18153 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18154 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
18155 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
18156 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44

18157 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18158 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18159 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18160 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18161 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18162 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18163 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18164 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18165 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18166 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18167 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18168 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18169 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18170 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18171 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18172 % Omacrongrave
 18173 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18174 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18175 % omacrongrave
 18176 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18177 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18178 % Omacronacute
 18179 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18180 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18181 % omacronacute
 18182 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18183 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18184 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18185 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18186 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18187 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18188 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18189 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18190 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18191 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18192 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18193 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18194 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18195 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18196 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 18197 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18198 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18199 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18200 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18201 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18202 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18203 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18204 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18205 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18206 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18207 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18208 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18209 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18210 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18211 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent

18212 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
18213 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
18214 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
18215 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
18216 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
18217 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
18218 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
18219 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
18220 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
18221 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
18222 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
18223 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
18224 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
18225 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
18226 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
18227 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
18228 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
18229 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
18230 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
18231 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
18232 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
18233 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
18234 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
18235 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
18236 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
18237 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
18238 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
18239 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
18240 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
18241 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
18242 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
18243 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
18244 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
18245 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
18246 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
18247 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
18248 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18249 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18250 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18251 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18252 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
18253 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18254 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
18255 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18256 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18257 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18258 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18259 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18260 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
18261 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18262 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87

18263 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 18264 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 18265 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 18266 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 18267 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 18268 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 18269 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 18270 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 18271 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 18272 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 18273 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 18274 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 18275 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 18276 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
 18277 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 18278 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
 18279 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 18280 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
 18281 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 18282 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 18283 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
 18284 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
 18285 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
 18286 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
 18287 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 18288 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 18289 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 18290 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 18291 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 18292 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 18293 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 18294 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 18295 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 18296 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 18297 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 18298 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 18299 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 taccent
 18300 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 18301 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 18302 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 18303 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 18304 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18305 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18306 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18307 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18308 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18309 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18310 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18311 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18312 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18313 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18314 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18315 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18316 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18317 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18318 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC

18319 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18320 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18321 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18322 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18323 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18324 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18325 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18326 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18327 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18328 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18329 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18330 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18331 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18332 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18333 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18334 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18335 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18336 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18337 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18338 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18339 % U+2013 EN DASH; endash
 18340 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18341 % U+2014 EM DASH; emdash
 18342 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18343 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18344 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18345 %* \textbardbl -> \textdoublevertline (tipa)
 18346 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18347 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18348 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18349 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18350 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18351 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18352 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18353 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18354 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18355 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18356 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18357 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18358 % U+2020 DAGGER; dagger
 18359 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18360 %* \textdagger -> \dag (LaTeX)
 18361 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18362 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18363 %* \textdaggerdbl -> \ddagger (LaTeX)
 18364 %* \textdaggerdbl -> \ddag (LaTeX)
 18365 % U+2022 BULLET; bullet
 18366 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18367 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18368 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18369 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18370 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18371 %* \textellipsis -> \mathellipsis
 18372 % U+2030 PER MILLE SIGN; perthousand
 18373 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030

18374 % U+2031 PER TEN THOUSAND SIGN
 18375 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18376 % U+2032 PRIME; minute; \prime (MnSymbol)
 18377 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18378 % U+2033 DOUBLE PRIME; \second (mathabx)
 18379 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18380 % U+2034 TRIPLE PRIME; \third (mathabx)
 18381 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18382 % U+2035 REVERSED PRIME; \backprime (AmS)
 18383 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18384 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 18385 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18386 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 18387 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18388 % U+203B REFERENCE MARK; referencemark
 18389 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18390 % U+203D INTERROBANG
 18391 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18392 % U+2044 FRACTION SLASH; fraction
 18393 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18394 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18395 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18396 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18397 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18398 % U+2052 COMMERCIAL MINUS SIGN
 18399 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18400 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18401 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18402 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18403 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18404 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18405 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18406 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18407 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18408 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18409 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18410 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18411 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18412 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18413 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18414 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18415 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18416 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18417 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18418 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18419 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18420 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18421 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18422 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18423 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18424 % U+207B SUPERSCRIPT MINUS
 18425 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18426 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior

18427 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
18428 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
18429 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
18430 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
18431 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
18432 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
18433 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
18434 % U+2080 SUBSCRIPT ZERO; zeroinferior
18435 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
18436 % U+2081 SUBSCRIPT ONE; oneinferior
18437 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18438 % U+2082 SUBSCRIPT TWO; twoinferior
18439 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18440 % U+2083 SUBSCRIPT THREE; threeinferior
18441 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
18442 % U+2084 SUBSCRIPT FOUR; fourinferior
18443 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18444 % U+2085 SUBSCRIPT FIVE; fiveinferior
18445 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18446 % U+2086 SUBSCRIPT SIX; sixinferior
18447 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18448 % U+2087 SUBSCRIPT SEVEN; seveninferior
18449 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18450 % U+2088 SUBSCRIPT EIGHT; eightinferior
18451 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18452 % U+2089 SUBSCRIPT NINE; nineinferior
18453 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18454 % U+208A SUBSCRIPT PLUS SIGN
18455 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18456 % U+208B SUBSCRIPT MINUS
18457 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18458 % U+208C SUBSCRIPT EQUALS SIGN
18459 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18460 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18461 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
18462 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
18463 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
18464 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
18465 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
18466 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
18467 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
18468 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
18469 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
18470 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
18471 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
18472 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
18473 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
18474 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
18475 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
18476 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
18477 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
18478 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
18479 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
18480 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
18481 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
18482 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
18483 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099

18484 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18485 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18486 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18487 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18488 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18489 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18490 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18491 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18492 % U+20A4 LIRA SIGN; afii08941, *lira
 18493 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18494 % U+20A6 NAIRA SIGN
 18495 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18496 % U+20A7 PESETA SIGN; peseta
 18497 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18498 % U+20A9 WON SIGN; won
 18499 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18500 % U+20AB DONG SIGN; dong
 18501 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18502 % U+20AC EURO SIGN; *Euro, euro
 18503 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18504 %* \texteuro -> \EurDig (marvosym)
 18505 %* \texteuro -> \EURdig (marvosym)
 18506 %* \texteuro -> \EurHv (marvosym)
 18507 %* \texteuro -> \EURhv (marvosym)
 18508 %* \texteuro -> \EurCr (marvosym)
 18509 %* \texteuro -> \EURcr (marvosym)
 18510 %* \texteuro -> \EurTm (marvosym)
 18511 %* \texteuro -> \EURtm (marvosym)
 18512 %* \texteuro -> \Eur (marvosym)
 18513 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18514 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18515 %* \textDeleatur -> \Denarius (marvosym)
 18516 % U+20B1 PESO SIGN
 18517 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18518 % U+20B2 GUARANI SIGN
 18519 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18520 % U+2103 DEGREE CELSIUS; centigrade
 18521 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18522 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18523 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18524 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18525 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18526 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18527 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18528 % U+2116 NUMERO SIGN; *afii61352, numero
 18529 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18530 % U+2117 SOUND RECORDING COPYRIGHT
 18531 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18532 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18533 % weierstrass; \wp (LaTeX)
 18534 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18535 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)

18536 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18537 % U+211E PRESCRIPTION TAKE; prescription
 18538 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18539 % U+2120 SERVICE MARK
 18540 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18541 % U+2122 TRADE MARK SIGN; trademark
 18542 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18543 % U+2126 OHM SIGN; Ohm, Omega
 18544 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18545 % U+2127 INVERTED OHM SIGN
 18546 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18547 %* \textmho -> \agemO (wasysym)
 18548 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18549 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18550 % U+212B ANGSTROM SIGN; angstrom
 18551 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18552 % U+212E ESTIMATED SYMBOL; estimated
 18553 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18554 %* \textestimated -> \EstimatedSign (marvosym)
 18555 %* \textestimated -> \Ecommerce (marvosym)
 18556 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18557 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18558 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18559 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18560 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18561 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18562 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18563 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18564 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18565 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18566 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18567 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18568 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18569 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18570 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18571 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18572 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18573 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18574 % U+2150 VULGAR FRACTION ONE SEVENTH
 18575 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18576 % U+2151 VULGAR FRACTION ONE NINTH
 18577 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18578 % U+2152 VULGAR FRACTION ONE TENTH
 18579 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18580 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18581 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18582 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18583 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18584 % U+2155 VULGAR FRACTION ONE FIFTH
 18585 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18586 % U+2156 VULGAR FRACTION TWO FIFTHS
 18587 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18588 % U+2157 VULGAR FRACTION THREE FIFTHS
 18589 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18590 % U+2158 VULGAR FRACTION FOUR FIFTHS

18591 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18592 % U+2159 VULGAR FRACTION ONE SIXTH
 18593 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18594 % U+215A VULGAR FRACTION FIVE SIXTHS
 18595 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18596 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18597 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18598 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18599 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18600 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18601 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18602 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18603 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18604 % U+2184 LATIN SMALL LETTER REVERSED C
 18605 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18606 % U+2189 VULGAR FRACTION ZERO THIRDS
 18607 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18608 % U+2190 LEFTWARDS ARROW; arrowleft
 18609 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18610 % U+2191 UPWARDS ARROW; arrowup
 18611 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18612 % U+2192 RIGHTWARDS ARROW; arrowright
 18613 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18614 %* \textrightarrow -> \MVRightArrow (marvosym)
 18615 %* \textrightarrow -> \MVRightarrow (marvosym)
 18616 % U+2193 DOWNWARDS ARROW; arrowdown
 18617 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18618 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18619 %* \textdownarrow -> \Force (marvosym)
 18620 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
 18621 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
 18622 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18623 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18624 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18625 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18626 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18627 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18628 %* \textnearrow -> \textglobrise (tipa)
 18629 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18630 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18631 %* \textsearrow -> \textglobfall (tipa)
 18632 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18633 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18634 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 18635 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18636 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 18637 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18638 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18639 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18640 % \ntwoheadleftarrow (txfonts/pxfonts)
 18641 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18642 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
 18643 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
 18644 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
 18645 % \twoheadrightarrow (AmS)

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18646 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18647 % \ntwoheadrightarrow (txfonts/pxfonts)
18648 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18649 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18650 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18651 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18652 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18653 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18654 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18655 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18656 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18657 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18658 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18659 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18660 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18661 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18662 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18663 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18664 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18665 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
18666 \DeclareTextCommand{\textnleftrightharrow}{PU}{\9041\256}%* U+21AE
18667 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18668 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18669 %* \textlightning -> \Lightning (marvosym)
18670 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18671 % \dlsh (mathabx)
18672 \DeclareTextCommand{\textdlsh}{PU}{\9041\265}%* U+21B5
18673 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18674 % \curvearrowleft (AmS)
18675 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18676 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18677 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18678 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18679 % \leftharpoonup (LaTeX)
18680 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18681 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18682 % \leftharpoondown (LaTeX)
18683 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18684 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18685 % \upharpoonright (AmS)
18686 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18687 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18688 % \upharpoonleft (AmS)
18689 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18690 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18691 % \rightharpoonup (LaTeX)
18692 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18693 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18694 % \rightharpoondown (LaTeX)
18695 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18696 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18697 % \downharpoonright (AmS)
18698 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18699 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;

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18700 % \downharpoonleft (AmS)
18701 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18702 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18703 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18704 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18705 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; arrowupleftofdown;
18706 % \updownarrows (MnSymbol)
18707 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18708 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleftoverright;
18709 % \leftrightarrows (AmS)
18710 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18711 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18712 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18713 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18714 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18715 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18716 \DeclareTextCommand{\textrightrightarrows}{PU}{\9041\311}%* U+21C9
18717 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18718 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18719 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18720 % \leftrightharpoons (AmS);
18721 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18722 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18723 % \rightleftharpoons (LaTeX, AmS)
18724 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18725 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftdblstroke;
18726 % \nLeftarrow (AmS)
18727 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18728 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
18729 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18730 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
18731 % \nRrightarrow (AmS)
18732 \DeclareTextCommand{\textnRrightarrow}{PU}{\9041\317}%* U+21CF
18733 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18734 % \Leftarrow (LaTeX)
18735 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18736 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18737 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18738 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18739 % \Rrightarrow (LaTeX)
18740 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18741 %* \textRrightarrow -> \Conclusion (marvosym)
18742 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18743 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18744 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18745 % \Leftrightarrow (LaTeX)
18746 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18747 %* \textLeftrightarrow -> \Equivalence (marvosym)
18748 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18749 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18750 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)

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18751 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18752 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18753 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18754 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18755 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18756 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18757 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18758 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18759 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18760 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18761 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18762 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18763 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18764 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18765 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18766 % U+21E0 LEFTWARDS DASHED ARROW; \dashrightarrow;
18767 % \dashleftarrow (AmS)
18768 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\340}%* U+21E0
18769 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18770 % U+21E1 UPWARDS DASHED ARROW; \dashrightarrow; \dasheduparrow (Mn-
Symbol)
18771 \DeclareTextCommand{\texdashuparrow}{PU}{\9041\341}%* U+21E1
18772 % U+21E2 RIGHTWARDS DASHED ARROW; \dashrightarrow; \dashrightar-
row (AmS)
18773 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18774 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18775 % U+21E3 DOWNWARDS DASHED ARROW; \dashrightarrow; \dasheddownar-
row (MnSymbol)
18776 \DeclareTextCommand{\texdashdownarrow}{PU}{\9041\343}%* U+21E3
18777 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18778 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18779 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18780 % \downuparrows (MnSymbol)
18781 \DeclareTextCommand{\texdownuparrows}{PU}{\9041\365}%* U+21F5
18782 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18783 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18784 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18785 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18786 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
18787 \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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18788 % U+2200 FOR ALL; forall; \forall (LaTeX)
18789 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18790 % U+2201 COMPLEMENT; \complement (AmS)
18791 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18792 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18793 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18794 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18795 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18796 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18797 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18798 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18799 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18800 %* \textemptyset -> \varnothing (AmS)
18801 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)

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18802 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18803 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18804 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18805 % U+2208 ELEMENT OF; element; \in (LaTeX)
18806 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18807 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18808 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18809 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18810 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18811 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18812 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18813 %* \textni -> \owns (mathabx)
18814 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18815 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18816 %* \textnotowner -> \notni (txfonts/pxfonts)
18817 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18818 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18819 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18820 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18821 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18822 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18823 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18824 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18825 % U+2212 MINUS SIGN; minus
18826 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18827 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18828 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18829 % U+2214 DOT PLUS; \dotplus (AmS)
18830 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18831 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18832 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18833 % \DividesNot (marvosym)
18834 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18835 % U+2216 SET MINUS; \setminus (LaTeX)
18836 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18837 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18838 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18839 % U+2218 RING OPERATOR; \circ (LaTeX)
18840 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18841 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18842 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18843 % U+221A SQUARE ROOT; radical
18844 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18845 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18846 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18847 %* \textpropto -> \varprop (wasysym)
18848 % U+221E INFINITY; infinity; \infty (LaTeX)
18849 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18850 % U+2220 ANGLE; angle; \angle (LaTeX)
18851 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18852 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18853 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18854 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18855 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18856 %* \textsphericalangle -> \varangle (wasysym)
18857 %* \textsphericalangle -> \Anglesign (marvosym)
18858 %* \textsphericalangle -> \AngleSign (marvosym)

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18859 % U+2223 DIVIDES; divides; \mid (LaTeX)
18860 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18861 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18862 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18863 %* \textnmid -> \notdivides (mathabx)
18864 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18865 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18866 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18867 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18868 %* \textnparallel -> nUpdownline (MnSymbol)
18869 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18870 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18871 % \owedge (stmaryrd)
18872 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18873 %* \textowedge -> \varowedge (stmaryrd)
18874 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18875 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18876 % \ovee (stmaryrd)
18877 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18878 %* \textovee -> \varovee (stmaryrd)
18879 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18880 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18881 % U+222A UNION; union; \cup (LaTeX)
18882 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18883 % U+222B INTEGRAL; integral; \int (LaTeX)
18884 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18885 %* \textint -> \varint (wasysym)
18886 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18887 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18888 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18889 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18890 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18891 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18892 %* \textoint -> \varoint (wasysym)
18893 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18894 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18895 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18896 % \ointclockwise (txfonts/pxfonts)
18897 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18898 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
18899 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18900 % U+2234 THEREFORE; therefore; \therefore (AmS)
18901 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18902 %* \texttherefore -> uptherefore (MnSymbol)
18903 % U+2235 BECAUSE; because; \because (AmS)
18904 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18905 %* \textbecause -> \downtherefore (MnSymbol)
18906 % U+2236 RATIO; \dotdot (MnSymbol)
18907 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18908 % U+2237 PROPORTION; \squaredots (MnSymbol)
18909 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18910 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18911 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18912 %* \textdotminus -> \textdotdiv (mathabx)
18913 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18914 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239

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18915 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18916 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18917 %* \textsim -> \AC (wasysym)
18918 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18919 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18920 % \nbacksim (txfonts/pxfonts)
18921 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18922 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18923 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18924 %* \textwr -> \wreath (MnSymbol)
18925 % U+2241 NOT TILDE; \nsim (AmS)
18926 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18927 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18928 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18929 % \neqsim (MnSymbol)
18930 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18931 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18932 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18933 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18934 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18935 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18936 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18937 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18938 % \ncong (AmS)
18939 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18940 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18941 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18942 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18943 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18944 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18945 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18946 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18947 % \napproxeq (txfonts/pxfonts)
18948 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18949 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18950 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18951 %* \texttriplesim -> \VHF (wasysym)
18952 % \ntriplesim (MnSymbol)
18953 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18954 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18955 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18956 % \nbackcong (MnSymbol)
18957 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18958 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18959 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18960 % \nasymp (txfonts/pxfonts)
18961 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18962 %* \textnasymp -> \notasym (mathabx)
18963 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18964 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18965 % \nBumpeq (txfonts/pxfonts)
18966 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18967 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18968 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18969 % \nbumpeq (txfonts/pxfonts)
18970 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338

18971 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
 18972 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
 18973 % \ndoteq (MnSymbol)
 18974 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
 18975 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
 18976 % \doteqdot (AmS)
 18977 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
 18978 %* \textdoteqdot -> \Doteq (MnSymbol)
 18979 % \nDoteq (MnSymbol)
 18980 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
 18981 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
 equalimage;
 18982 % \fallingdotseq (AmS)
 18983 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
 18984 % \nfallingdotseq (MnSymbol)
 18985 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
 18986 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
 matelyequal;
 18987 % \risingdotseq (AmS)
 18988 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
 18989 % \nrisingdoteq (MnSymbol)
 18990 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
 18991 % U+2254 COLON EQUALS; \colonequals (colonequals)
 18992 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
 18993 % U+2255 EQUALS COLON; \equalscolon (colonequals)
 18994 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
 18995 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
 18996 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
 18997 % \neqcirc (MnSymbol)
 18998 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
 18999 % U+2257 RING EQUAL TO; \circeq (AmS)
 19000 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
 19001 % \ncirceq (MnSymbol)
 19002 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
 19003 % U+2259 ESTIMATES; \hateq (MnSymbol)
 19004 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
 19005 %* \texthateq -> \corresponds (mathabx)
 19006 %* \texthateq -> \Corresponds (marvosym)
 19007 % \nhateq (MnSymbol)
 19008 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
 19009 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
 19010 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
 19011 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19012 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19013 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19014 %* \textneq -> \nequal (MnSymbol)
 19015 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19016 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19017 %* \textequiv -> \Congruent (marvosym)
 19018 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
 19019 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19020 %* \textnequiv -> \NotCongruent (marvosym)
 19021 %* \textnequiv -> \notequiv (mathabx)
 19022 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19023 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19024 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19025 %* \textleq -> \LessOrEqual (marvosym)

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19026 % U+2265 GREATER-THAN OR EQUAL TO; greaterqual;
19027 % \ge (LaTeX), \geq (LaTeX)
19028 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
19029 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
19030 %* \textgeq -> \LargerOrEqual (marvosym)
19031 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
19032 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
19033 % \nleqq (txfonts/pxfonts)
19034 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
19035 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
19036 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
19037 % \ngeqq (txfonts/pxfonts)
19038 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
19039 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
19040 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
19041 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
19042 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
19043 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
19044 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
19045 % \nll (txfonts/pxfonts)
19046 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
19047 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
19048 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
19049 % \ngg (txfonts/pxfonts)
19050 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
19051 % U+226C BETWEEN; \between (AmS)
19052 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
19053 % U+226E NOT LESS-THAN; notless; \nless (AmS)
19054 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
19055 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
19056 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
19057 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
19058 % \nleq (AmS)
19059 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
19060 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
19061 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
19062 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
19063 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
19064 %* \textlessim -> \apprle (wasysym)
19065 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
19066 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19067 %* \textgtrsim -> \apprge (wasysym)
19068 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
19069 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19070 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
19071 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19072 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19073 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19074 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19075 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19076 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
19077 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278

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19078 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
19079 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19080 % U+227A PRECEDES; precedes; \prec (LaTeX)
19081 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19082 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19083 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19084 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19085 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19086 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19087 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19088 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19089 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19090 % \nprecsim (txfonts/pxfonts)
19091 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19092 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19093 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19094 % \nsuccsim (txfonts/pxfonts)
19095 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19096 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19097 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19098 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
19099 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19100 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19101 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19102 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19103 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19104 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19105 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19106 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19107 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19108 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19109 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19110 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19111 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19112 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19113 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19114 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19115 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19116 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
19117 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
19118 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
19119 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19120 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)
19121 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19122 % U+228E MULTISET UNION; \cupplus (MnSymbol)
19123 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19124 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19125 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19126 % \nsqsubset (txfonts/pxfonts)
19127 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19128 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19129 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19130 % \nsqsupset (txfonts/pxfonts)
19131 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338

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19132 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
19133 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
19134 % \nsqsubseteq (txfonts/pxfonts)
19135 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19136 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19137 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19138 % \nsqsupseteq (txfonts/pxfonts)
19139 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19140 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19141 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19142 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19143 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19144 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19145 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19146 %* \textoplus -> \varoplus (stmaryrd)
19147 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19148 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19149 %* \textominus -> \varominus (stmaryrd)
19150 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19151 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19152 %* \textotimes -> \varotimes (stmaryrd)
19153 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19154 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19155 %* \textoslash -> \varoslash (stmaryrd)
19156 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19157 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19158 %* \textodot -> \varodot (stmaryrd)
19159 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19160 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19161 %* \textcircledcirc -> \ocirc (mathabx)
19162 %* \textcircledcirc -> \varocircle (stmaryrd)
19163 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19164 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19165 %* \textcircledast -> \varoast (stmaryrd)
19166 %* \textcircledast -> \oasterisk (mathabx)
19167 % U+229D CIRCLED DASH; \circleddash (AmS)
19168 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19169 % U+229E SQUARED PLUS; \boxplus (AmS)
19170 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19171 % U+229F SQUARED MINUS; \boxminus (AmS)
19172 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19173 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19174 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19175 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19176 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19177 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19178 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19179 %* \textvdash -> \rightvdash (MnSymbol)
19180 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19181 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19182 %* \textdashv -> \leftvdash (MnSymbol)
19183 % \ndashv (mathabx)
19184 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19185 %* \textndashv -> \nleftvdash (MnSymbol)
19186 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19187 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
19188 %* \texttop -> \downvdash (MnSymbol)

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19189 % \ndownvdash (MnSymbol)
19190 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19191 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19192 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19193 %* \textbot -> \upvdash (MnSymbol)
19194 % \nupvdash (MnSymbol)
19195 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19196 %* \textnupvdash -> \nperp (MnSymbol)
19197 % U+22A8 TRUE; \vdash (AmS)
19198 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19199 %* \textvDash -> \models (LaTeX)
19200 %* \textvDash -> \rightmodels (MnSymbol)
19201 % U+22A9 FORCES; \Vdash (AmS)
19202 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19203 %* \textVdash -> \rightVdash (MnSymbol)
19204 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19205 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19206 % \nVvdash (mathabx)
19207 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19208 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19209 % \VDash (mathabx)
19210 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19211 %* \textVDash -> \rightModels (MnSymbol)
19212 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19213 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19214 %* \textnvdash -> \nrightrvdash (MnSymbol)
19215 % U+22AD NOT TRUE; \nvDash (AmS)
19216 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19217 %* \textnvDash -> \nrightrmodels (MnSymbol)
19218 %* \textnvDash -> \nmodels (MnSymbol)
19219 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19220 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19221 %* \textnVdash -> \nrightrVdash (MnSymbol)
19222 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
19223 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19224 %* \textnVDash -> \nrightrModels (MnSymbol)
19225 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19226 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19227 %* \textlhd -> \lessclosed (MnSymbol)
19228 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19229 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19230 %* \textrhd -> \gtrclosed (MnSymbol)
19231 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19232 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19233 %* \textunlhd -> \leqclosed (MnSymbol)
19234 %* \textunlhd -> \trianglelefteq (MnSymbol)
19235 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19236 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19237 %* \textunrhd -> \geqclosed (MnSymbol)
19238 %* \textunrhd -> \trianglerighteq (MnSymbol)
19239 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19240 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19241 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19242 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19243 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)

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19244 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19245 % U+22BB XOR; \veebar (AmS)
19246 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19247 % U+22BC NAND; \barwedge (mathabx)
19248 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19249 % U+22C6 STAR OPERATOR; \star (LaTeX)
19250 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19251 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19252 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19253 % U+22C8 BOWTIE; \bowtie (LaTeX)
19254 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19255 %* \textbowtie -> \Bowtie (wasysym)
19256 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19257 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19258 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19259 % \rtimes (AmS)
19260 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19261 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19262 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19263 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19264 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19265 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19266 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19267 % \nbacksimeq (txfonts/pxfonts)
19268 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19269 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19270 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19271 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19272 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19273 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19274 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19275 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19276 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19277 % \nSubset (txfonts/pxfonts)
19278 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19279 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19280 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19281 % \nSupset (txfonts/pxfonts)
19282 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19283 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19284 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19285 %* \textCap -> \doublecap (mathabx)
19286 % U+22D3 DOUBLE UNION; \Cup (AmS)
19287 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19288 %* \textCup -> \doublecup (mathabx)
19289 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19290 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19291 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19292 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19293 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19294 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19295 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19296 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19297 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19298 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19299 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
19300 % \lesseqgtr (AmS)

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19301 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19302 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
19303 % \gtreqless (AmS)
19304 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19305 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19306 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19307 % \ncurlyeqprec (mathabx)
19308 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19309 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19310 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19311 % \ncurlyeqsucc (mathabx)
19312 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19313 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19314 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19315 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19316 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19317 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
19318 % fonts/pxfonts)
19318 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19319 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
19320 % fonts/pxfonts)
19320 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19321 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19322 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19323 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19324 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
19325 % abx)
19325 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19326 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19327 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19328 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19329 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19330 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19331 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccsim (AmS)
19332 \DeclareTextCommand{\textpreccsim}{PU}{\9042\350}%* U+22E8
19333 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
19334 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
19335 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19336 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19337 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19338 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
19339 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19340 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19341 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19342 % \ntrianglelefteq (AmS)
19343 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19344 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19345 % \ntrianglerighteq (AmS)
19346 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19347 %* \textntrianglerighteq -> \textngeqclosed
19348 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
19349 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19350 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19351 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19352 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19353 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0

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19354 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19355 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19356 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19357 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19358 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19359 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19360 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19361 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19362 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19363 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 19364 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19365 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19366 % U+231A WATCH; \clock (wasysym)
 19367 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19368 %* \textclock -> \Clocklogo (marvosym)
 19369 %* \textclock -> \ClockLogo (marvosym)
 19370 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19371 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19372 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19373 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19374 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19375 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19376 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19377 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19378 % U+2322 FROWN; \frown (LaTeX)
 19379 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19380 % U+2323 SMILE; \smile (LaTeX)
 19381 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19382 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19383 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19384 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
 19385 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19386 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
 19387 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 19388 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 19389 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 19390 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19391 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19392 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19393 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
 19394 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19395 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19396 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19397 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19398 % \notbackslash (wasysym)
 19399 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19400 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 19401 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19402 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19403 % \APLleftarrowbox (wasysym)
 19404 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19405 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19406 % \APLrightarrowbox (wasysym)

19407 \DeclareTextCommand{\textAPLrightrightarrowbox}{PU}{\9043\110}%* U+2348
 19408 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19409 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19410 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19411 % \APLdownarrowbox (wasysym)
 19412 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19413 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19414 % \APLinput (wasysym)
 19415 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19416 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19417 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19418 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19419 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19420 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19421 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19422 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19423 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19424 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19425 % \ForwardToIndex (marvosym)
 19426 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19427 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19428 % \RewindToIndex (marvosym)
 19429 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19430 % U+2422 BLANK SYMBOL
 19431 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19432 % U+2423 OPEN BOX; blank
 19433 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19434 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19435 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19436 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19437 % U+2460 CIRCLED DIGIT ONE; onecircle
 19438 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19439 % U+2461 CIRCLED DIGIT TWO; twocircle
 19440 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19441 % U+2462 CIRCLED DIGIT THREE; threecircle
 19442 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19443 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19444 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19445 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19446 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19447 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19448 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19449 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19450 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19451 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19452 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19453 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19454 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468

19455 % U+2469 CIRCLED NUMBER TEN; tencircle
 19456 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19457 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19458 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19459 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19460 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19461 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19462 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19463 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19464 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19465 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19466 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19467 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19468 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19469 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19470 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19471 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19472 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19473 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19474 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19475 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19476 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19477 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19478 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19479 % \CircledA (marvosym)
 19480 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19481 %* \textCircledA -> \CleaningA
 19482 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19483 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19484 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19485 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19486 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19487 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19488 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19489 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19490 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19491 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19492 % \CleaningF (marvosym)
 19493 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19494 % \CleaningFF (marvosym)
 19495 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19496 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19497 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19498 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19499 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19500 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19501 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19502 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19503 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19504 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19505 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19506 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19508 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19509 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19510 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19511 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3

19512 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19513 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19514 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19515 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19516 % \CleaningP (marvosym)
 19517 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19518 % \CleaningPP (marvosym)
 19519 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19520 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19521 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19522 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19523 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19524 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19525 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19526 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19527 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19528 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19529 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19530 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19531 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19532 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19533 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19534 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19535 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19536 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19537 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19538 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19539 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19540 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19541 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19542 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19543 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19544 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19545 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19546 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19547 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19548 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19549 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19550 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19551 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19552 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19553 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19554 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19555 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19556 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19557 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19558 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19559 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19560 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19561 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19562 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19563 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19564 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19565 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19566 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19567 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19568 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle

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19569 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
19570 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
19571 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
19572 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
19573 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
19574 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
19575 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
19576 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
19577 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
19578 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
19579 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
19580 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
19581 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
19582 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
19583 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
19584 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
19585 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
19586 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
19587 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
19588 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
19589 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
19590 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
19591 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
19592 % U+24EA CIRCLED DIGIT ZERO
19593 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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51.2.27 Box Drawing: U+2500 to 257F

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19594 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
      Line (marvosym)
19595 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
19596 %* \textCuttingLine -> \Kutline (marvosym)
19597 %* \textCuttingLine -> \CutLine (marvosym)
19598 %* \textCuttingLine -> \Cutline (marvosym)

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51.2.28 Geometric Shapes: U+25A0 to U+25FF

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19599 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
19600 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
19601 %* \textUParrow -> \MoveUp (marvosym)
19602 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
19603 % \bigtriangleup (LaTeX)
19604 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
19605 %* \textbigtriangleup -> \APLup (wasysym)
19606 %* \textbigtriangleup -> \Bleech (marvosym)
19607 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19608 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19609 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
      tion);
19610 % whiterightpointingtriangle; \triangleright (LaTeX)
19611 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19612 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19613 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19614 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19615 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19616 %* \textDOWNarrow -> \MoveDown (marvosym)
19617 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
19618 % \bigtriangledown (LaTeX)

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19619 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19620 %* \textbigtriangledown -> \APLdown (wasysym)
19621 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19622 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19623 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
restriction);
19624 % \whiteleftpointingtriangle; \triangleleft (LaTeX)
19625 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19626 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19627 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19628 % U+25C7 WHITE DIAMOND; \whitediamond; \diamond (LaTeX)
19629 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19630 %* \textdiamond -> \Diamond (wasysym)
19631 % U+25CA LOZENGE; \lozenge; \lozenge (AmS)
19632 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19633 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19634 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19635 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19636 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19637 % U+25E6 WHITE BULLET; *openbullet, \whitebullet
19638 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19639 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19640 % \boxbar (stmaryrd)
19641 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19642 % U+25EF LARGE CIRCLE; \largecircle
19643 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19644 %* \textbigcircle -> \varbigcirc (stmaryrd)
19645 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19646 % U+2601 CLOUD; \Cloud (ifsym)
19647 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19648 % U+2605 BLACK STAR; \FiveStar (bbding)
19649 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19650 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19651 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19652 % U+260E BLACK TELEPHONE; \telephoneblack; \Phone (bbding)
19653 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19654 %* \textPhone -> \Telefon (marvosym)
19655 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19656 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19657 %* \textboxempty -> \Box (wasysym)
19658 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19659 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19660 %* \textCheckedbox -> \CheckedBox (marvosym)
19661 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19662 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19663 %* \textCrossedbox -> \XBox (wasysym)
19664 %* \textCrossedbox -> \CrossedBox (marvosym)
19665 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19666 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19667 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19668 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19669 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
19670 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19671 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19672 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C

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19673 %* \textHandLeft -> \rightpointleft (fourier)
 19674 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
 19675 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19676 %* \textHandRight -> \leftpointright (fourier)
 19677 %* \textHandRight -> \PointingHand (marvosym)
 19678 %* \textHandRight -> \Pointinghand (marvosym)
 19679 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19680 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19681 %* \textRadioactivity -> \Radiation (ifsym)
 19682 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19683 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19684 % U+2625 ANKH; \Ankh (marvosym)
 19685 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19686 % U+262F YIN YANG; \YinYang (marvosym)
 19687 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19688 %* \textYinYang -> \Yinyang (marvosym)
 19689 %* \textYinYang -> \YingYang (marvosym)
 19690 %* \textYinYang -> \Yingyang (marvosym)
 19691 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19692 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19693 %* \textfrownie -> \Frowny (marvosym)
 19694 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19695 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19696 %* \textsmiley -> \Smiley (marvosym)
 19697 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19698 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19699 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19700 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19701 %* \textsun -> \Sun (marvosym)
 19702 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19703 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19704 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19705 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19706 % U+263F MERCURY; \mercury (wasysym)
 19707 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19708 %* \textmercury -> \Mercury (marvosym)
 19709 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19710 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19711 %* \textPUfemale -> \textfemale (tipx)
 19712 %* \textPUfemale -> \female (wasysym)
 19713 %* \textPUfemale -> \venus (wasysym)
 19714 %* \textPUfemale -> \Venus (marvosym)
 19715 %* \textPUfemale -> \Female (marvosym)
 19716 % U+2641 EARTH; \earth (wasysym)
 19717 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
 19718 %* \textearth -> \Earth (marvosym)
 19719 % U+2642 MALE SIGN; male, mars; \male (wasysym)
 19720 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
 19721 %* \textmale -> \mars (wasysym)
 19722 %* \textmale -> \Mars (marvosym)
 19723 %* \textmale -> \Male (marvosym)
 19724 % U+2643 JUPITER; \jupiter (wasysym)
 19725 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
 19726 %* \textjupiter -> \Jupiter (marvosym)
 19727 % U+2644 SATURN; \saturn (wasysym)
 19728 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
 19729 %* \textsaturn -> \Saturn (marvosym)


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19730 % U+2645 URANUS; \uranus (wasysym)
19731 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19732 %* \texturanus -> \Uranus (marvosym)
19733 % U+2646 NEPTUNE; \neptune (wasysym)
19734 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19735 %* \textneptune -> \Neptune (marvosym)
19736 % U+2647 PLUTO; \pluto (wasysym)
19737 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19738 %* \textpluto -> \Pluto (marvosym)
19739 % U+2648 ARIES; \aries (wasysym)
19740 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19741 %* \textaries -> \Aries (marvosym)
19742 % U+2649 TAURUS; \taurus (wasysym)
19743 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19744 %* \texttaurus -> \Taurus (marvosym)
19745 % U+264A GEMINI; \gemini (wasysym)
19746 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19747 %* \textgemini -> \Gemini (marvosym)
19748 % U+264B CANCER; \cancer (wasysym)
19749 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19750 %* \textcancer -> \Cancer (marvosym)
19751 % U+264C LEO; \leo (wasysym)
19752 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19753 %* \textleo -> \Leo (marvosym)
19754 % U+264D VIRGO; \virgo (wasysym)
19755 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19756 %* \textvirgo -> \Virgo (marvosym)
19757 % U+264E LIBRA; \libra (wasysym)
19758 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19759 %* \textlibra -> \Libra (marvosym)
19760 % U+264F SCORPIO; \scorpio (wasysym)
19761 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19762 %* \textscorpio -> \Scorpio (marvosym)
19763 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19764 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19765 %* \textsagittarius -> \Sagittarius (marvosym)
19766 % U+2651 CAPRICORN; \capricornus (wasysym)
19767 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19768 %* \textcapricornus -> \Capricorn (marvosym)
19769 % U+2652 AQUARIUS; \aquarius (wasysym)
19770 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19771 %* \textaquarius -> \Aquarius (marvosym)
19772 % U+2653 PISCES; \pisces (wasysym)
19773 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19774 %* \textpisces -> \Pisces (marvosym)
19775 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19776 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19777 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19778 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19779 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19780 %* \textheartsuitwhite -> \Heart (marvosym)
19781 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19782 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19783 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19784 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19785 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19786 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663

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19787 %* \textclubsuitblack -> \clubsuit (MnSymbol)
 19788 % U+2664 WHITE SPADE SUIT; spadesuitwhite
 19789 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
 19790 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
 19791 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
 19792 % U+2666 BLACK DIAMOND SUIT; diamond
 19793 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
 19794 % U+2667 WHITE CLUB SUIT; clubsuitwhite
 19795 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
 19796 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
 19797 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
 19798 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
 19799 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 19800 %* \textmusicalnote -> \eighthnote (wasysym, arev)
 19801 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
 19802 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
 19803 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
 note (arev)
 19804 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
 19805 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
 19806 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
 19807 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
 19808 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
 19809 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
 19810 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
 19811 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
 19812 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
 19813 %* \textrecycle -> \Recycling (marvosym)
 19814 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
 19815 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
 19816 % U+2691 BLACK FLAG; \Flag (ifsym)
 19817 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19818 %* \textFlag -> \VarFlag (ifsym)
 19819 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19820 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19821 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19822 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19823 %* \textdsmilitary -> \textxswup (fourier)
 19824 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19825 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19826 % U+2696 SCALES; \dsjuridical (dictsym)
 19827 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19828 % U+2697 ALEMBIC; \dschemical (dictsym)
 19829 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19830 % U+2698 FLOWER; \dsbiological (dictsym)
 19831 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19832 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19833 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19834 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19835 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19836 % U+26A0 WARNING SIGN; \danger (fourier)
 19837 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19838 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19839 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19840 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19841 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19842 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-

vosym)

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19843 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19844 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19845 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
19846 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
19847 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
19848 % U+26AD MARRIAGE SYMBOL
19849 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
19850 % U+26AE DIVORCE SYMBOL
19851 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
19852 % U+26B2 NEUTER; \textunrcfemale (tipx)
19853 \DeclareTextCommand{\textPUunrcfemale}{PU}{\9046\262}% U+26B2
19854 %* \textPUunrcfemale -> \textunrcfemale (tipx)
19855 % U+26B9 SEXTILE; \hexstar (wasysym)
19856 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
19857 % U+26BD SOCCER BALL; \Football (marvosym)
19858 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
19859 %* \textSoccerBall -> \Football (marvosym)
19860 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
19861 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
19862 % U+26C6 RAIN; \Rain (ifsym)
19863 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
19864 % U+26D4 NO ENTRY; \noway (fourier)
19865 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
19866 % U+26F0 MOUNTAIN; \Mountain (ifsym)
19867 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
19868 % U+26FA TENT; \Tent (ifsym)
19869 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

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51.2.30 Dingbats: U+2700 to U+27BF

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19870 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
19871 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
19872 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
19873 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
19874 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
19875 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
19876 %* \textScissorRight -> \RightScissors (marvosym)
19877 %* \textScissorRight -> \Leftscissors (marvosym)
19878 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
19879 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
19880 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
19881 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
19882 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
19883 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
19884 % U+2707 TAPE DRIVE; \Tape (bbling)
19885 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
19886 % U+2708 AIRPLANE; \Plane (bbling)
19887 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
19888 % U+2709 ENVELOPE; \Envelope (bbling),
19889 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
19890 %* \textEnvelope -> \Letter (marvosym)
19891 % U+270C VICTORY HAND; \Peace (bbling)
19892 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
19893 % U+270D WRITING HAND; \WritingHand (marvosym)
19894 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
19895 %* \textWritingHand -> \Writinghand (marvosym)
19896 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbling)

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19897 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19898 % U+270F PENCIL; \PencilRight (bding)
 19899 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19900 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19901 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19902 % U+2711 WHITE NIB; \NibRight (bding)
 19903 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19904 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19905 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19906 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19907 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19908 %* \textCheckmark -> \checkmark (MnSymbol)
 19909 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19910 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19911 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19912 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19913 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19914 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19915 % U+2717 BALLOT X; \XSolidBrush (bding)
 19916 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19917 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19918 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19919 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19920 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19921 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19922 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19923 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19924 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19925 % U+271D LATIN CROSS; \Cross (bding)
 19926 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19927 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19928 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19929 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19930 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19931 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19932 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19933 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19934 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19935 %* \textDavidStar -> \davidstar (wasysym)
 19936 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19937 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19938 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19939 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19940 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19941 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19942 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19943 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19944 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19945 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19946 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19947 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19948 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19949 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19950 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19951 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19952 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)

19953 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
19954 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
19955 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
19956 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
19957 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
19958 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
19959 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
19960 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
19961 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
19962 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
19963 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
19964 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
19965 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
19966 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
19967 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
19968 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
19969 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
19970 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
19971 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
19972 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
19973 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
19974 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
19975 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
19976 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
19977 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
19978 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
19979 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
19980 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
19981 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
19982 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
19983 % \SixFlowerOpenCenter (bding)
19984 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
19985 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
19986 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
19987 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
19988 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
19989 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
19990 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
19991 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
19992 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
19993 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
19994 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
19995 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
19996 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
19997 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
19998 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
19999 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
20000 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
20001 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
20002 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745

20003 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20004 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20005 % U+2747 SPARKLE; \Sparkle (bding)
 20006 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20007 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20008 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20009 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20010 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20011 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20012 % \EightFlowerPetalRemoved (bding)
 20013 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20014 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20015 % \EightAsterisk (bding)
 20016 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20017 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20018 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20019 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20020 % \SquareShadowBottomRight (bding)
 20021 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20022 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20023 % \SquareShadowTopRight (bding)
 20024 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20025 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20026 % \SquareCastShadowBottomRight (bding)
 20027 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20028 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20029 % \SquareCastShadowTopRight (bding)
 20030 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20031 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 20032 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20033 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20034 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20035 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20036 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20037 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20038 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20039 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20040 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20041 % \notperp (mathabx)
 20042 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20043 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20044 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20045 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20046 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20047 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20048 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20049 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20050 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20051 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20052 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20053 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20054 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20055 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20056 % \circlearrowleft (AmS)
 20057 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20058 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20059 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20060 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20061 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20062 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20063 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20064 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20065 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20066 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20067 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20068 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 20069 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20070 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20071 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20072 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20073 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20074 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20075 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20076 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20077 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20078 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20079 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20080 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20081 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20082 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 20083 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20084 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20085 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20086 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 20087 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20088 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20089 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20090 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20091 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20092 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20093 % \rcurvearrowne (MnSymbol)
 20094 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20095 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20096 % \lcurvearrowse (MnSymbol)
 20097 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20098 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20099 % \lcurvearrowsw (MnSymbol)
 20100 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20101 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20102 % \rcurvearrowse (MnSymbol)

20103 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
 20104 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-Symbol)
 20105 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20106 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20107 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20108 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20109 % \rcurvearrowdown (MnSymbol)
 20110 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20111 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20112 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20113 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
 20114 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20115 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20116 % \rcurvearrowright (MnSymbol)
 20117 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20118 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
 20119 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20120 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
 20121 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20122 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20123 % \updownharpoonrightleft (MnSymbol)
 20124 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20125 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20126 % \updownharpoonleftright (MnSymbol)
 20127 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20128 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20129 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20130 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20131 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20132 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20133 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20134 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
 20135 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20136 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20137 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
 20138 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 20139 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 20140 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20141 % \leftbarharpoon (mathabx)
 20142 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20143 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20144 % LONG DASH; \barleftharpoon (mathabx)
 20145 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20146 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20147 % LONG DASH; \rightbarharpoon (mathabx)
 20148 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20149 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20150 % LONG DASH; \barrightharpoon (mathabx)
 20151 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20152 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON

20153 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20154 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20155 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20156 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20157 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20158 % U+297F DOWN FISH TAIL
 20159 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20160 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20161 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 20162 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20163 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20164 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20165 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20166 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20167 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20168 %* \textobar -> \textvarobar (stmaryrd)
 20169 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20170 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20171 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20172 %* \textobslash -> \obackslash (mathabx)
 20173 %* \textobslash -> \varobslash (stmaryrd)
 20174 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20176 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20177 %* \textobot -> \odplus (ulsy)
 20178 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20179 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20180 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20181 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20182 %* \textolessthan -> \varolessthan (stmaryrd)
 20183 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20184 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20185 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20186 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20187 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20188 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20189 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20190 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 20191 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20192 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20193 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20194 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20195 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20196 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20197 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20198 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20199 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20200 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20201 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20202 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20203 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04

20204 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20205 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20206 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20207 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20208 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20209 % pxfonts, wasysym)
 20210 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20211 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20212 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20213 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20214 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20215 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20216 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20217 %* \textminusdot -> \divdot (mathabx)
 20218 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20219 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20220 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20221 % \dimes (mathdesign)
 20222 \DeclareTextCommand{\textdimes}{PU}{\9052\062}%* U+2A32
 20223 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20224 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20225 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20226 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20227 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20228 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20229 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20230 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20231 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20232 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20233 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20234 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20235 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20236 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20237 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20238 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20239 %* \textdoublevee -> \merge (stmaryrd)
 20240 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20241 % \doublebarwedge (AmS)
 20242 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20243 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20244 % \veedoublebar (mahtabx)
 20245 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20246 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20247 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20248 % \neqdot (MnSymbol)
 20249 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20250 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20251 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20252 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20253 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20254 % \nleqslant (txfonts/pxfonts)
 20255 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20256 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20257 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20258 % \ngeqslant (txfonts/pxfonts)
 20259 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20260 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)

20261 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20262 % \nlessapprox (txfonts/pxfonts)
 20263 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20264 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20265 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20266 % \ngtrapprox (txfonts/pxfonts)
 20267 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20268 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20269 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20270 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20271 % \gneq (AmS)
 20272 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20273 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20274 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20275 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20276 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20277 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 20278 % \lesseqqgtr (AmS)
 20279 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 20280 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 20281 % \gtreqqless (AmS)
 20282 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 20283 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20284 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20285 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20286 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20287 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20288 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20289 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20290 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20291 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 20292 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20293 % \npreceq (txfonts/pxfonts)
 20294 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20295 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 20296 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20297 % \nsucceq (txfonts/pxfonts)
 20298 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20299 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20300 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20301 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20302 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20303 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20304 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20305 % \npreceqq (txfonts/pxfonts)
 20306 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20307 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20308 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20309 % \nsucceqq (txfonts/pxfonts)
 20310 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20311 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)

20312 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20313 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20314 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20315 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20316 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20317 % \nprecapprox (txfonts/pxfonts)
 20318 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20319 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20320 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20321 % \nsuccapprox (txfonts/pxfonts)
 20322 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20323 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20324 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20325 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20326 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20327 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20328 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20329 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20330 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20331 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20332 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20333 % \nsupseteqq (mathabx)
 20334 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20335 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20336 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20337 %* \textdashV -> \leftVdash (MnSymbol)
 20338 % \ndashV (mathabx)
 20339 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20340 %* \textndashV -> \nleftVdash (MnSymbol)
 20341 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20342 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20343 %* \textDashv -> \leftmodels (MnSymbol)
 20344 % \nDashv (mathabx)
 20345 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20346 %* \textnDashv -> \nleftmodels (MnSymbol)
 20347 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20348 % \DashV (mathabx)
 20349 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20350 %* \textDashV -> \leftModels (MnSymbol)
 20351 % \nDashV (mathabx)
 20352 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20353 %* \textnDashV -> \nleftModels (MnSymbol)
 20354 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20355 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20356 % \ndownmodels (MnSymbol)
 20357 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20358 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20359 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20360 % \nupmodels (MnSymbol)
 20361 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20362 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20363 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20364 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20365 % \interleave (stmaryrd)
 20366 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4

20367 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20368 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20369 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20370 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20371 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20372 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20373 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20374 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20375 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20376 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20377 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20378 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20379 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20380 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20381 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20382 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20383 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20384 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20385 % \textdownstep (tipa)
 20386 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20387 % U+A727 LATIN SMALL LETTER HENG; \texheng (tipx)
 20388 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20389 %* \textPUheng -> \texheng (tipx)
 20390 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \texthookfour (tipx)
 20391 \DeclareTextCommand{\textPUhookfour}{PU}{\9247\054}% U+A72C
 20392 %* \textPUhookfour -> \texthookfour (tipx)
 20393 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20394 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20395 %* \textPUscf -> \textscf (tipx)
 20396 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 20397 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20398 %* \textPUaolig -> \textao lig (tipx)
 20399 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20400 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20401 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20402 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20403 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20404 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20405 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20406 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20407 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20408 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20409 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)

20410 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20411 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20412 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20413 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20414 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20415 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20416 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20417 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20418 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20419 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20420 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20421 %* \textfullnote -> \Ganz (harmony)
 20422 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20423 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20424 %* \texthalfnote -> \Halb (harmony)
 20425 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20426 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20427 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20428 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20429 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20430 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20431 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20432 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20433 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20434 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20435 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20436 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20437 % U+1F468 MAN; \ManFace (marvosym)
 20438 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20439 % U+1F469 WOMAN; \WomanFace (marvosym)
 20440 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20441 %* \textWomanFace -> \Womanface (marvosym)
 20442 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20443 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20444 %* \textFax -> \Faxmachine (marvosym)
 20445 % U+1F525 FIRE; \Fire (ifsym)
 20446 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20447 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20448 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20449 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20450 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20451 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20452 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20453 \DeclareTextCommand{\SS}{PU}{SS}%
 20454 % \textcopyleft (textcomp)
 20455 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20456 % \ccnc (ccllicenses)
 20457 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20458 % \ccnd (ccllicenses)
 20459 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 20460 % \ccsa (ccllicenses)

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20461 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20462 % \Info (marvosym, china2e)
20463 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20464 % \CESign (marvosym)
20465 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20466 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20467 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20468 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20469 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20470 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20471 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20472 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20473 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20474 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

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20475 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20476 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20477 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20478 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20479 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20480 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20481 <*puvnenc>
20482 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20483 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20484 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20485 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20486 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20487 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20488 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20489 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20490 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20491 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20492 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20493 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20494 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20495 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20496 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
20497 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20498 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20499 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20500 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20501 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
20502 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20503 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20504 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20505 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20506 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7

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20507 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20508 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20509 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20510 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20511 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20512 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20513 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20514 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20515 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20516 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20517 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20518 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20519 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20520 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20521 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20522 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20523 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20524 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20525 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20526 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20527 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20528 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20529 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20530 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20531 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20532 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20533 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20534 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20535 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20536 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20537 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20538 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20539 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20540 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20541 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20542 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20543 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20544 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20545 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20546 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20547 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20548 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20549 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20550 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20551 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20552 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20553 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20554 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20555 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20556 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20557 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20558 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20559 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20560 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20561 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20562 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20563 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4


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20564 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
20565 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
20566 \DeclareTextCompositeCommand{`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
20567 \DeclareTextCompositeCommand{h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
20568 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA
20569 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}% U+00C9
20570 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}% U+1EB8
20571 \DeclareTextCompositeCommand{`}{PU}{E}{\80\310}% U+00C8
20572 \DeclareTextCompositeCommand{h}{PU}{E}{\9036\272}% U+1EBA
20573 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
20574 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
20575 \DeclareTextCompositeCommand{d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
20576 \DeclareTextCompositeCommand{`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
20577 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
20578 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
20579 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}% U+00CD
20580 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}% U+1ECA
20581 \DeclareTextCompositeCommand{`}{PU}{I}{\80\314}% U+00CC
20582 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}% U+1EC8
20583 \DeclareTextCompositeCommand{~}{PU}{I}{\81\050}% U+0128
20584 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
20585 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}% U+1ECC
20586 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
20587 \DeclareTextCompositeCommand{h}{PU}{O}{\9036\316}% U+1ECE
20588 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
20589 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
20590 \DeclareTextCompositeCommand{d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
20591 \DeclareTextCompositeCommand{`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
20592 \DeclareTextCompositeCommand{h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
20593 \DeclareTextCompositeCommand{~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
20594 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\332}% U+1EDA
20595 \DeclareTextCompositeCommand{d}{PU}{\OHORN}{\9036\342}% U+1EE2
20596 \DeclareTextCompositeCommand{`}{PU}{\OHORN}{\9036\334}% U+1EDC
20597 \DeclareTextCompositeCommand{h}{PU}{\OHORN}{\9036\336}% U+1EDE
20598 \DeclareTextCompositeCommand{~}{PU}{\OHORN}{\9036\340}% U+1EE0
20599 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA
20600 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}% U+1EE4
20601 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
20602 \DeclareTextCompositeCommand{h}{PU}{U}{\9036\346}% U+1EE6
20603 \DeclareTextCompositeCommand{~}{PU}{U}{\81\150}% U+0168
20604 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\350}% U+1EE8
20605 \DeclareTextCompositeCommand{d}{PU}{\UHORN}{\9036\360}% U+1EF0
20606 \DeclareTextCompositeCommand{`}{PU}{\UHORN}{\9036\352}% U+1EEA
20607 \DeclareTextCompositeCommand{h}{PU}{\UHORN}{\9036\354}% U+1EEC
20608 \DeclareTextCompositeCommand{~}{PU}{\UHORN}{\9036\356}% U+1EEE
20609 \DeclareTextCompositeCommand{'}{PU}{Y}{\80\335}% U+00DD
20610 \DeclareTextCompositeCommand{d}{PU}{Y}{\9036\364}% U+1EF4
20611 \DeclareTextCompositeCommand{`}{PU}{Y}{\9036\362}% U+1EF2
20612 \DeclareTextCompositeCommand{h}{PU}{Y}{\9036\366}% U+1EF6
20613 \DeclareTextCompositeCommand{~}{PU}{Y}{\9036\370}% U+1EF8
20614 (/puvnenc)

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51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
20615 (*puarenc)
```

20616 % U+0621;afii57409;ARABIC LETTER HAMZA
 20617 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
 20618 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
 20619 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
 20620 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
 20621 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
 20622 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
 20623 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
 20624 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
 20625 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
 20626 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
 20627 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
 20628 % U+0627;afii57415;ARABIC LETTER ALEF
 20629 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20630 % U+0628;afii57416;ARABIC LETTER BEH
 20631 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20632 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20633 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20634 % U+062A;afii57418;ARABIC LETTER TEH
 20635 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20636 % U+062B;afii57419;ARABIC LETTER THEH
 20637 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20638 % U+062C;afii57420;ARABIC LETTER JEEM
 20639 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20640 % U+062D;afii57421;ARABIC LETTER HAH
 20641 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20642 % U+062E;afii57422;ARABIC LETTER KHAH
 20643 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20644 % U+062F;afii57423;ARABIC LETTER DAL
 20645 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20646 % U+0630;afii57424;ARABIC LETTER THAL
 20647 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20648 % U+0631;afii57425;ARABIC LETTER REH
 20649 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20650 % U+0632;afii57426;ARABIC LETTER ZAIN
 20651 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20652 % U+0633;afii57427;ARABIC LETTER SEEN
 20653 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20654 % U+0634;afii57428;ARABIC LETTER SHEEN
 20655 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20656 % U+0635;afii57429;ARABIC LETTER SAD
 20657 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20658 % U+0636;afii57430;ARABIC LETTER DAD
 20659 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20660 % U+0637;afii57431;ARABIC LETTER TAH
 20661 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20662 % U+0638;afii57432;ARABIC LETTER ZAH
 20663 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20664 % U+0639;afii57433;ARABIC LETTER AIN
 20665 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20666 % U+063A;afii57434;ARABIC LETTER GHAIN
 20667 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20668 % U+0640;afii57440;ARABIC TATWEEL
 20669 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20670 % U+0641;afii57441;ARABIC LETTER FEH
 20671 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20672 % U+0642;afii57442;ARABIC LETTER QAF

20673 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20674 % U+0643;afii57443;ARABIC LETTER KAF
 20675 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20676 % U+0644;afii57444;ARABIC LETTER LAM
 20677 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20678 % U+0645;afii57445;ARABIC LETTER MEEM
 20679 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20680 % U+0646;afii57446;ARABIC LETTER NOON
 20681 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20682 % U+0647;afii57470;ARABIC LETTER HEH
 20683 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20684 % U+0648;afii57448;ARABIC LETTER WAW
 20685 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20686 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20687 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20688 % U+064A;afii57450;ARABIC LETTER YEH
 20689 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20690 % U+064B;afii57451;ARABIC FATHATAN
 20691 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20692 % U+064C;afii57452;ARABIC DAMMATAN
 20693 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20694 % U+064D;afii57453;ARABIC KASRATAN
 20695 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20696 % U+064E;afii57454;ARABIC FATHA
 20697 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20698 % U+064F;afii57455;ARABIC DAMMA
 20699 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20700 % U+0650;afii57456;ARABIC KASRA
 20701 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20702 % U+0651;afii57457;ARABIC SHADDA
 20703 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20704 % U+0652;afii57458;ARABIC SUKUN
 20705 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20706 % U+067E ARABIC LETTER PEH; afii57506
 20707 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20708 % U+0686 ARABIC LETTER TCHEH; afii57507
 20709 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20710 % U+0698 ARABIC LETTER JEH; afii57508
 20711 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20712 % U+06A9 ARABIC LETTER KEHEH
 20713 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20714 % U+06AF ARABIC LETTER GAF; afii57509
 20715 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20716 % U+06CC ARABIC LETTER FARSI YEH
 20717 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20718 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20719 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20720 % U+200D ZERO WIDTH JOINER; afii301
 20721 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D
 20722 (/puarenc)
 20723 (*psdextra)
 20724 \Hy@VersionCheck{psdextra.def}
 20725 \newcommand*{\psdmapshortnames}{%
 20726 \let\MVPlus\textMVPlus

20727 \let\MVComma\textMVComma
 20728 \let\MVMinus\textMVMinus
 20729 \let\MVPeriod\textMVPeriod
 20730 \let\MVDivision\textMVDivision
 20731 \let\MVZero\textMVZero
 20732 \let\MVOne\textMVOne
 20733 \let\MVTwo\textMVTwo
 20734 \let\MVThree\textMVThree
 20735 \let\MVFour\textMVFour
 20736 \let\MVFive\textMVFive
 20737 \let\MVSix\textMVSix
 20738 \let\MVSeven\textMVSeven
 20739 \let\MVEight\textMVEight
 20740 \let\MVNine\textMVNine
 20741 \let\MVAt\textMVAt
 20742 \let\copyright\textcopyright
 20743 \let\twosuperior\texttwosuperior
 20744 \let\threesuperior\textthreesuperior
 20745 \let\onesuperior\textonesuperior
 20746 \let\Thorn\textThorn
 20747 \let\thorn\textthorn
 20748 \let\hbar\texthbar
 20749 \let\hausA\texthausA
 20750 \let\hausD\texthausD
 20751 \let\hausK\texthausK
 20752 \let\bar\textbar
 20753 \let\inve\textinve
 20754 \let\slashc\textslashc
 20755 \let\scripta\textscripta
 20756 \let\openo\textopeno
 20757 \let\rtaild\textrtaild
 20758 \let\reve\textreve
 20759 \let\schwa\textschwa
 20760 \let\niepsilon\textniepsilon
 20761 \let\repsilon\textrepsilon
 20762 \let\rhookrepsilon\text\rhookrepsilon
 20763 \let\scriptg\textscriptg
 20764 \let\scg\textscg
 20765 \let\ipagamma\textipagamma
 20766 \let\babygamma\textbabygamma
 20767 \let\bari\textbari
 20768 \let\niiota\textniiota
 20769 \let\sci\textsci
 20770 \let\scn\textscn
 20771 \let\niphi\textniphi
 20772 \let\longleg\textlongleg
 20773 \let\scr\textscr
 20774 \let\invscr\textinvscr
 20775 \let\esh\textesh
 20776 \let\baru\textbaru
 20777 \let\niupsilon\textniupsilon
 20778 \let\scriptv\textscriptv
 20779 \let\turnv\textturnv
 20780 \let\turnw\textturnw
 20781 \let\turny\textturny
 20782 \let\scy\textscy
 20783 \let\yogh\textyogh

20784 \let\glotstop\textglotstop
 20785 \let\revglotstop\textrevglotstop
 20786 \let\invglotstop\textinvglotstop
 20787 \let\Gamma\textGamma
 20788 \let\Delta\textDelta
 20789 \let\Theta\textTheta
 20790 \let\Lambda\textLambda
 20791 \let\Xi\textXi
 20792 \let\Pi\textPi
 20793 \let\Sigma\textSigma
 20794 \let\Upsilon\textUpsilon
 20795 \let\Phi\textPhi
 20796 \let\Psi\textPsi
 20797 \let\Omega\textOmega
 20798 \let\alpha\textalpha
 20799 \let\beta\textbeta
 20800 \let\gamma\textgamma
 20801 \let\delta\textdelta
 20802 \let\epsilon\textepsilon
 20803 \let\zeta\textzeta
 20804 \let\eta\texteta
 20805 \let\theta\texttheta
 20806 \let\iota\textiota
 20807 \let\kappa\textkappa
 20808 \let\lambda\textlambda
 20809 \let\mugreek\textmugreek
 20810 \let\nu\textnu
 20811 \let\xi\textxi
 20812 \let\pi\textpi
 20813 \let\rho\rho
 20814 \let\varsigma\textvarsigma
 20815 \let\sigma\textsigma
 20816 \let\tau\texttau
 20817 \let\upsilon\textupsilon
 20818 \let\phi\textphi
 20819 \let\chi\textchi
 20820 \let\psi\textpsi
 20821 \let\omega\textomega
 20822 \let\scd\textscd
 20823 \let\scu\textscu
 20824 \let\iinferior\textiinferior
 20825 \let\rinferior\extrinferior
 20826 \let\uinferior\textuinferior
 20827 \let\vinferior\textvinferior
 20828 \let\betainferior\textbetainferior
 20829 \let\gammainferior\textgammainferior
 20830 \let\rhoinferior\extrhoinferior
 20831 \let\phiinferior\textphiinferior
 20832 \let\chiinferior\textchiinferior
 20833 \let\barsci\textbarsci
 20834 \let\barp\textbarp
 20835 \let\barscu\textbarscu
 20836 \let\htrtaild\texthtrtaild
 20837 \let\dagger\textdagger
 20838 \let\bullet\textbullet
 20839 \let\hdotfor\texthdotfor
 20840 \let\prime\textprime

20841 $\backslash\mathrm{let}\backslash\mathrm{second}\backslash\mathrm{textsecond}$
 20842 $\backslash\mathrm{let}\backslash\mathrm{third}\backslash\mathrm{textthird}$
 20843 $\backslash\mathrm{let}\backslash\mathrm{backprime}\backslash\mathrm{textbackprime}$
 20844 $\backslash\mathrm{let}\backslash\mathrm{lefttherefore}\backslash\mathrm{textlefttherefore}$
 20845 $\backslash\mathrm{let}\backslash\mathrm{fourth}\backslash\mathrm{textfourth}$
 20846 $\backslash\mathrm{let}\backslash\mathrm{diamonddots}\backslash\mathrm{textdiamonddots}$
 20847 $\backslash\mathrm{let}\backslash\mathrm{zerosuperior}\backslash\mathrm{textzerosuperior}$
 20848 $\backslash\mathrm{let}\backslash\mathrm{isuperior}\backslash\mathrm{textisuperior}$
 20849 $\backslash\mathrm{let}\backslash\mathrm{foursuperior}\backslash\mathrm{textfoursuperior}$
 20850 $\backslash\mathrm{let}\backslash\mathrm{fivesuperior}\backslash\mathrm{textfivesuperior}$
 20851 $\backslash\mathrm{let}\backslash\mathrm{sixsuperior}\backslash\mathrm{textsixsuperior}$
 20852 $\backslash\mathrm{let}\backslash\mathrm{sevensuperior}\backslash\mathrm{textsevensuperior}$
 20853 $\backslash\mathrm{let}\backslash\mathrm{eightsuperior}\backslash\mathrm{texteightsuperior}$
 20854 $\backslash\mathrm{let}\backslash\mathrm{ninesuperior}\backslash\mathrm{textninesuperior}$
 20855 $\backslash\mathrm{let}\backslash\mathrm{plussuperior}\backslash\mathrm{textplussuperior}$
 20856 $\backslash\mathrm{let}\backslash\mathrm{minussuperior}\backslash\mathrm{textminussuperior}$
 20857 $\backslash\mathrm{let}\backslash\mathrm{equalsuperior}\backslash\mathrm{tequalsuperior}$
 20858 $\backslash\mathrm{let}\backslash\mathrm{parenleftsuperior}\backslash\mathrm{textparenleftsuperior}$
 20859 $\backslash\mathrm{let}\backslash\mathrm{parenrightsuperior}\backslash\mathrm{textparenrightsuperior}$
 20860 $\backslash\mathrm{let}\backslash\mathrm{nsuperior}\backslash\mathrm{textnsuperior}$
 20861 $\backslash\mathrm{let}\backslash\mathrm{zeroinferior}\backslash\mathrm{textzeroinferior}$
 20862 $\backslash\mathrm{let}\backslash\mathrm{oneinferior}\backslash\mathrm{textoneinferior}$
 20863 $\backslash\mathrm{let}\backslash\mathrm{twoinferior}\backslash\mathrm{texttwoinferior}$
 20864 $\backslash\mathrm{let}\backslash\mathrm{threeinferior}\backslash\mathrm{textthreeinferior}$
 20865 $\backslash\mathrm{let}\backslash\mathrm{fourinferior}\backslash\mathrm{textfourinferior}$
 20866 $\backslash\mathrm{let}\backslash\mathrm{fiveinferior}\backslash\mathrm{textfiveinferior}$
 20867 $\backslash\mathrm{let}\backslash\mathrm{sixinferior}\backslash\mathrm{textsixinferior}$
 20868 $\backslash\mathrm{let}\backslash\mathrm{seveninferior}\backslash\mathrm{textseveninferior}$
 20869 $\backslash\mathrm{let}\backslash\mathrm{eightinferior}\backslash\mathrm{texteightinferior}$
 20870 $\backslash\mathrm{let}\backslash\mathrm{nineinferior}\backslash\mathrm{textnineinferior}$
 20871 $\backslash\mathrm{let}\backslash\mathrm{plusinferior}\backslash\mathrm{textplusinferior}$
 20872 $\backslash\mathrm{let}\backslash\mathrm{minusinferior}\backslash\mathrm{textminusinferior}$
 20873 $\backslash\mathrm{let}\backslash\mathrm{equalsinferior}\backslash\mathrm{tequalsinferior}$
 20874 $\backslash\mathrm{let}\backslash\mathrm{parenleftinferior}\backslash\mathrm{textparenleftinferior}$
 20875 $\backslash\mathrm{let}\backslash\mathrm{parenrightinferior}\backslash\mathrm{textparenrightinferior}$
 20876 $\backslash\mathrm{let}\backslash\mathrm{ainferior}\backslash\mathrm{textainferior}$
 20877 $\backslash\mathrm{let}\backslash\mathrm{einferior}\backslash\mathrm{texteinferior}$
 20878 $\backslash\mathrm{let}\backslash\mathrm{oinferior}\backslash\mathrm{textoinferior}$
 20879 $\backslash\mathrm{let}\backslash\mathrm{xinferior}\backslash\mathrm{textxinferior}$
 20880 $\backslash\mathrm{let}\backslash\mathrm{schwainferior}\backslash\mathrm{textschwainferior}$
 20881 $\backslash\mathrm{let}\backslash\mathrm{hinferior}\backslash\mathrm{texthinferior}$
 20882 $\backslash\mathrm{let}\backslash\mathrm{kinferior}\backslash\mathrm{textkinferior}$
 20883 $\backslash\mathrm{let}\backslash\mathrm{linferior}\backslash\mathrm{textlinferior}$
 20884 $\backslash\mathrm{let}\backslash\mathrm{mininferior}\backslash\mathrm{textmininferior}$
 20885 $\backslash\mathrm{let}\backslash\mathrm{ninferior}\backslash\mathrm{textninferior}$
 20886 $\backslash\mathrm{let}\backslash\mathrm{pinferior}\backslash\mathrm{textpinferior}$
 20887 $\backslash\mathrm{let}\backslash\mathrm{sinferior}\backslash\mathrm{textsinferior}$
 20888 $\backslash\mathrm{let}\backslash\mathrm{tinferior}\backslash\mathrm{texttinferior}$
 20889 $\backslash\mathrm{let}\backslash\mathrm{Deleatur}\backslash\mathrm{textDeleatur}$
 20890 $\backslash\mathrm{let}\backslash\mathrm{hslash}\backslash\mathrm{texthslash}$
 20891 $\backslash\mathrm{let}\backslash\mathrm{Im}\backslash\mathrm{textIm}$
 20892 $\backslash\mathrm{let}\backslash\mathrm{ell}\backslash\mathrm{textell}$
 20893 $\backslash\mathrm{let}\backslash\mathrm{wp}\backslash\mathrm{textwp}$
 20894 $\backslash\mathrm{let}\backslash\mathrm{Re}\backslash\mathrm{textRe}$
 20895 $\backslash\mathrm{let}\backslash\mathrm{mho}\backslash\mathrm{textmho}$
 20896 $\backslash\mathrm{let}\backslash\mathrm{riota}\backslash\mathrm{textriota}$
 20897 $\backslash\mathrm{let}\backslash\mathrm{Finv}\backslash\mathrm{textFinv}$

20898 \let\aleph\textaleph
 20899 \let\beth\textbeth
 20900 \let\gimel\textgimel
 20901 \let\daleth\textdaleth
 20902 \let\xrightarrow\textxrightarrow
 20903 \let\Game\textGame
 20904 \let\leftarrow\textleftarrow
 20905 \let\uparrow\textuparrow
 20906 \let\rightarrow\textrightarrow
 20907 \let\downarrow\textdownarrow
 20908 \let\leftrightarrow\textleftrightarrow
 20909 \let\updownarrow\textupdownarrow
 20910 \let\nwarrow\textnwarrow
 20911 \let\nearrow\textnearrow
 20912 \let\searrow\textsearrow
 20913 \let\swarrow\textswarrow
 20914 \let\nleftarrow\textnleftarrow
 20915 \let\nrightarrow\textnrightarrow
 20916 \let\twoheadleftarrow\texttwoheadleftarrow
 20917 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20918 \let\twoheaduparrow\texttwoheaduparrow
 20919 \let\twoheadrightarrow\texttwoheadrightarrow
 20920 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20921 \let\twoheaddownarrow\texttwoheaddownarrow
 20922 \let\leftarrowtail\textleftarrowtail
 20923 \let\rightarrowtail\textrightarrowtail
 20924 \let\mapsto\textmapsto
 20925 \let\hookleftarrow\texthookleftarrow
 20926 \let\hookrightarrow\texthookrightarrow
 20927 \let\looparrowleft\textlooparrowleft
 20928 \let\looparrowright\textlooparrowright
 20929 \let\leftrightharpoonup\textleftrightharpoonup
 20930 \let\lightning\textlightning
 20931 \let\dlsh\textdlsh
 20932 \let\curvearrowleft\textcurvearrowleft
 20933 \let\curvearrowright\textcurvearrowright
 20934 \let\leftharpoonup\textleftharpoonup
 20935 \let\leftharpoondown\textleftharpoondown
 20936 \let\upharpoonright\textupharpoonright
 20937 \let\upharpoonleft\textupharpoonleft
 20938 \let\rightharpoonup\text\rightharpoonup
 20939 \let\rightharpoondown\text\rightharpoondown
 20940 \let\downharpoonright\textdownharpoonright
 20941 \let\downharpoonleft\textdownharpoonleft
 20942 \let\rightleftarrows\textrightleftarrows
 20943 \let\updownarrows\textupdownarrows
 20944 \let\leftrightarrows\textleftrightarrows
 20945 \let\leftleftarrows\textleftleftarrows
 20946 \let\upuparrows\textupuparrows
 20947 \let\righttrightarrows\textrighttrightarrows
 20948 \let\downdownarrows\textdowndownarrows
 20949 \let\leftrightharpoons\textleftrightharpoons
 20950 \let\rightleftharpoons\textrightleftharpoons
 20951 \let\Leftarrow\textLeftarrow
 20952 \let\Leftarrow\textLeftarrow
 20953 \let\Rightarrow\textRightarrow
 20954 \let\Leftarrow\textLeftarrow

20955 \Uparrow
 20956 \Rrightarrow
 20957 \Downarrow
 20958 \Leftrightarrow
 20959 \Updownarrow
 20960 \Nrightarrow
 20961 \Nearrow
 20962 \searrow
 20963 \swarrow
 20964 \Lleftarrow
 20965 \Rrightarrow
 20966 \leftrightsquigarrow
 20967 \rightsquigarrow
 20968 \dashleftarrow
 20969 \dasheduparrow
 20970 \dashrightarrow
 20971 \dasheddownarrow
 20972 \rightarrowtail
 20973 \Downarrows
 20974 \leftarrowtriangle
 20975 \rightarrowtriangle
 20976 \leftrightarrowtriangle
 20977 \forall
 20978 \complement
 20979 ∂
 20980 \exists
 20981 \nexists
 20982 \emptyset
 20983 \triangle
 20984 ∇
 20985 \in
 20986 \notin
 20987 \smallin
 20988 \ni
 20989 \notown
 20990 \smallown
 20991 \prod
 20992 \amalg
 20993 \sum
 20994 \mp
 20995 \dotplus
 20996 \Divides
 20997 \DividesNot
 20998 \setminus
 20999 \ast
 21000 \circ
 21001 \surd
 21002 \propto
 21003 ∞
 21004 \angle
 21005 \measuredangle
 21006 \sphericalangle
 21007 \mid
 21008 \nmid
 21009 \parallel
 21010 \nparallel
 21011 \wedge

21012 $\backslash\text{owedge}$
 21013 $\backslash\text{vee}$
 21014 $\backslash\text{ovee}$
 21015 $\backslash\text{cap}$
 21016 $\backslash\text{cup}$
 21017 $\backslash\text{int}$
 21018 $\backslash\text{iint}$
 21019 $\backslash\text{iiint}$
 21020 $\backslash\text{ooint}$
 21021 $\backslash\text{oiint}$
 21022 $\backslash\text{oointclockwise}$
 21023 $\backslash\text{oointctrclockwise}$
 21024 $\backslash\text{therefore}$
 21025 $\backslash\text{because}$
 21026 $\backslash\text{vdotdot}$
 21027 $\backslash\text{squaredots}$
 21028 $\backslash\text{dotminus}$
 21029 $\backslash\text{eqcolon}$
 21030 $\backslash\text{sim}$
 21031 $\backslash\text{backsim}$
 21032 $\backslash\text{nbacksim}$
 21033 $\backslash\text{wr}$
 21034 $\backslash\text{nsim}$
 21035 $\backslash\text{eqsim}$
 21036 $\backslash\text{neqsim}$
 21037 $\backslash\text{simeq}$
 21038 $\backslash\text{nsimeq}$
 21039 $\backslash\text{cong}$
 21040 $\backslash\text{ncong}$
 21041 $\backslash\text{approx}$
 21042 $\backslash\text{napprox}$
 21043 $\backslash\text{approxeq}$
 21044 $\backslash\text{napproxeq}$
 21045 $\backslash\text{triplesim}$
 21046 $\backslash\text{ntriplesim}$
 21047 $\backslash\text{backcong}$
 21048 $\backslash\text{nbackcong}$
 21049 $\backslash\text{asympt}$
 21050 $\backslash\text{nasympt}$
 21051 $\backslash\text{Bumpeq}$
 21052 $\backslash\text{nBumpeq}$
 21053 $\backslash\text{bumpeq}$
 21054 $\backslash\text{nbumpeq}$
 21055 $\backslash\text{doteq}$
 21056 $\backslash\text{ndoteq}$
 21057 $\backslash\text{doteqdot}$
 21058 $\backslash\text{nDoteq}$
 21059 $\backslash\text{fallingdoteq}$
 21060 $\backslash\text{nfallingdoteq}$
 21061 $\backslash\text{risingdoteq}$
 21062 $\backslash\text{nrisingdoteq}$
 21063 $\backslash\text{colonequals}$
 21064 $\backslash\text{equalscolon}$
 21065 $\backslash\text{eqcirc}$
 21066 $\backslash\text{neqcirc}$
 21067 $\backslash\text{circeq}$
 21068 $\backslash\text{ncirceq}$

21069 `\let\hateq\texthateq`
 21070 `\let\nhateq\textnhateq`
 21071 `\let\triangleeq\texttriangleeq`
 21072 `\let\neq\textneq`
 21073 `\let\ne\textne`
 21074 `\let\equiv\textequiv`
 21075 `\let\nequiv\textnequiv`
 21076 `\let\leq\textleq`
 21077 `\let\le\textle`
 21078 `\let\geq\textgeq`
 21079 `\let\ge\textge`
 21080 `\let\leqq\textleqq`
 21081 `\let\leqq\textnleqq`
 21082 `\let\geqq\textgeqq`
 21083 `\let\geqq\textngeqq`
 21084 `\let\lneqq\textlneqq`
 21085 `\let\gneqq\textgneqq`
 21086 `\let\ll\textll`
 21087 `\let\nll\textnll`
 21088 `\let\gg\textgg`
 21089 `\let\ngg\textngg`
 21090 `\let\between\textbetween`
 21091 `\let\nless\textnless`
 21092 `\let\ngtr\textngtr`
 21093 `\let\leq\textnleq`
 21094 `\let\geq\textngeq`
 21095 `\let\lessim\textlessim`
 21096 `\let\gtrsim\textgtrsim`
 21097 `\let\nlessim\textnlessim`
 21098 `\let\ngtrsim\textngtrsim`
 21099 `\let\lessgtr\textlessgtr`
 21100 `\let\gtrless\textgtrless`
 21101 `\let\ngtrless\textngtrless`
 21102 `\let\nlessgtr\textnlessgtr`
 21103 `\let\prec\textprec`
 21104 `\let\succ\textsucc`
 21105 `\let\preccurlyeq\textpreccurlyeq`
 21106 `\let\succcurlyeq\textsucccurlyeq`
 21107 `\let\precsim\textprecsim`
 21108 `\let\precsim\textnprecsim`
 21109 `\let\succsim\textsuccsim`
 21110 `\let\succsim\textnsuccsim`
 21111 `\let\prec\textnprec`
 21112 `\let\succ\textnsucc`
 21113 `\let\subset\textsubset`
 21114 `\let\supset\textsupset`
 21115 `\let\nsubset\textnsubset`
 21116 `\let\nsupset\textnsupset`
 21117 `\let\subseteq\textsubseteq`
 21118 `\let\supseteq\textsupseteq`
 21119 `\let\nsubseteq\textnsubseteq`
 21120 `\let\nsupseteq\textnsupseteq`
 21121 `\let\subsetneq\textsubsetneq`
 21122 `\let\supsetneq\textsupsetneq`
 21123 `\let\cupdot\textcupdot`
 21124 `\let\cupplus\textcupplus`
 21125 `\let\sqsubset\textsqssubset`

21126 $\backslash\mathrm{nsqsubset}\backslash\mathrm{textnsqsubset}$
 21127 $\backslash\mathrm{sqsupset}\backslash\mathrm{textsqsupset}$
 21128 $\backslash\mathrm{nsqsupset}\backslash\mathrm{textnsqsupset}$
 21129 $\backslash\mathrm{sqsubseq}\backslash\mathrm{textsqsubseq}$
 21130 $\backslash\mathrm{nsqsubseq}\backslash\mathrm{textnsqsubseq}$
 21131 $\backslash\mathrm{sqsupseteq}\backslash\mathrm{textsqsupseteq}$
 21132 $\backslash\mathrm{nsqsupseteq}\backslash\mathrm{textnsqsupseteq}$
 21133 $\backslash\mathrm{sqcap}\backslash\mathrm{textsqcap}$
 21134 $\backslash\mathrm{sqcup}\backslash\mathrm{textsqcup}$
 21135 $\backslash\mathrm{oplus}\backslash\mathrm{textoplus}$
 21136 $\backslash\mathrm{ominus}\backslash\mathrm{textominus}$
 21137 $\backslash\mathrm{otimes}\backslash\mathrm{textotimes}$
 21138 $\backslash\mathrm{oslash}\backslash\mathrm{textoslash}$
 21139 $\backslash\mathrm{odot}\backslash\mathrm{textodot}$
 21140 $\backslash\mathrm{circledcirc}\backslash\mathrm{textcircledcirc}$
 21141 $\backslash\mathrm{circledast}\backslash\mathrm{textcircledast}$
 21142 $\backslash\mathrm{circleddash}\backslash\mathrm{textcircleddash}$
 21143 $\backslash\mathrm{boxplus}\backslash\mathrm{textboxplus}$
 21144 $\backslash\mathrm{boxminus}\backslash\mathrm{textboxminus}$
 21145 $\backslash\mathrm{boxtimes}\backslash\mathrm{textboxtimes}$
 21146 $\backslash\mathrm{boxdot}\backslash\mathrm{textboxdot}$
 21147 $\backslash\mathrm{vdash}\backslash\mathrm{textvdash}$
 21148 $\backslash\mathrm{dashv}\backslash\mathrm{texdashv}$
 21149 $\backslash\mathrm{ndashv}\backslash\mathrm{textndashv}$
 21150 $\backslash\mathrm{top}\backslash\mathrm{texttop}$
 21151 $\backslash\mathrm{ndownvdash}\backslash\mathrm{textndownvdash}$
 21152 $\backslash\mathrm{bot}\backslash\mathrm{textbot}$
 21153 $\backslash\mathrm{nupvdash}\backslash\mathrm{textnupvdash}$
 21154 $\backslash\mathrm{vDash}\backslash\mathrm{textvDash}$
 21155 $\backslash\mathrm{Vdash}\backslash\mathrm{textVdash}$
 21156 $\backslash\mathrm{Vvdash}\backslash\mathrm{textVvdash}$
 21157 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 21158 $\backslash\mathrm{VDash}\backslash\mathrm{textVDash}$
 21159 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 21160 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 21161 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 21162 $\backslash\mathrm{nVDash}\backslash\mathrm{textnVDash}$
 21163 $\backslash\mathrm{lhs}\backslash\mathrm{textrhs}$
 21164 $\backslash\mathrm{rhd}\backslash\mathrm{textrhd}$
 21165 $\backslash\mathrm{unlhd}\backslash\mathrm{textunlhd}$
 21166 $\backslash\mathrm{unrhd}\backslash\mathrm{textunrhd}$
 21167 $\backslash\mathrm{multimapdotbothA}\backslash\mathrm{textmultimapdotbothA}$
 21168 $\backslash\mathrm{multimapdotbothB}\backslash\mathrm{textmultimapdotbothB}$
 21169 $\backslash\mathrm{multimap}\backslash\mathrm{textmultimap}$
 21170 $\backslash\mathrm{veebar}\backslash\mathrm{textveebar}$
 21171 $\backslash\mathrm{barwedge}\backslash\mathrm{textbarwedge}$
 21172 $\backslash\mathrm{star}\backslash\mathrm{textstar}$
 21173 $\backslash\mathrm{divideontimes}\backslash\mathrm{textdivideontimes}$
 21174 $\backslash\mathrm{bowtie}\backslash\mathrm{textbowtie}$
 21175 $\backslash\mathrm{ltimes}\backslash\mathrm{textltimes}$
 21176 $\backslash\mathrm{rtimes}\backslash\mathrm{textrtimes}$
 21177 $\backslash\mathrm{leftthreetimes}\backslash\mathrm{textleftthreetimes}$
 21178 $\backslash\mathrm{rightthreetimes}\backslash\mathrm{textrightthreetimes}$
 21179 $\backslash\mathrm{backsimeq}\backslash\mathrm{textbacksimeq}$
 21180 $\backslash\mathrm{nbacksimeq}\backslash\mathrm{textnbacksimeq}$
 21181 $\backslash\mathrm{curlyvee}\backslash\mathrm{textcurlyvee}$
 21182 $\backslash\mathrm{curlywedge}\backslash\mathrm{textcurlywedge}$

21183 $\backslash\text{let}\backslash\text{Subset}\backslash\text{textSubset}$
 21184 $\backslash\text{let}\backslash\text{nSubset}\backslash\text{textnSubset}$
 21185 $\backslash\text{let}\backslash\text{Supset}\backslash\text{textSupset}$
 21186 $\backslash\text{let}\backslash\text{nSupset}\backslash\text{textnSupset}$
 21187 $\backslash\text{let}\backslash\text{Cap}\backslash\text{textCap}$
 21188 $\backslash\text{let}\backslash\text{Cup}\backslash\text{textCup}$
 21189 $\backslash\text{let}\backslash\text{pitchfork}\backslash\text{textpitchfork}$
 21190 $\backslash\text{let}\backslash\text{lessdot}\backslash\text{textlessdot}$
 21191 $\backslash\text{let}\backslash\text{gtrdot}\backslash\text{textgtrdot}$
 21192 $\backslash\text{let}\backslash\text{lll}\backslash\text{textlll}$
 21193 $\backslash\text{let}\backslash\text{ggg}\backslash\text{textggg}$
 21194 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 21195 $\backslash\text{let}\backslash\text{gtreqless}\backslash\text{textgtreqless}$
 21196 $\backslash\text{let}\backslash\text{curlyeqprec}\backslash\text{textcurlyeqprec}$
 21197 $\backslash\text{let}\backslash\text{ncurlyeqprec}\backslash\text{textncurlyeqprec}$
 21198 $\backslash\text{let}\backslash\text{curlyeqsucc}\backslash\text{textcurlyeqsucc}$
 21199 $\backslash\text{let}\backslash\text{ncurlyeqsucc}\backslash\text{textncurlyeqsucc}$
 21200 $\backslash\text{let}\backslash\text{npreccurlyeq}\backslash\text{textnpreccurlyeq}$
 21201 $\backslash\text{let}\backslash\text{nsucccurlyeq}\backslash\text{textnsucccurlyeq}$
 21202 $\backslash\text{let}\backslash\text{nqsubseteq}\backslash\text{textnqsubseteq}$
 21203 $\backslash\text{let}\backslash\text{nqsupseteq}\backslash\text{textnqsupseteq}$
 21204 $\backslash\text{let}\backslash\text{sqsubsetneq}\backslash\text{textsqsubsetneq}$
 21205 $\backslash\text{let}\backslash\text{sqsupsetneq}\backslash\text{textsqsupsetneq}$
 21206 $\backslash\text{let}\backslash\text{lnsim}\backslash\text{textlnsim}$
 21207 $\backslash\text{let}\backslash\text{gnsim}\backslash\text{textgnsim}$
 21208 $\backslash\text{let}\backslash\text{precnsim}\backslash\text{textprecnsim}$
 21209 $\backslash\text{let}\backslash\text{succnsim}\backslash\text{textsuccnsim}$
 21210 $\backslash\text{let}\backslash\text{ntriangleleft}\backslash\text{textntriangleleft}$
 21211 $\backslash\text{let}\backslash\text{ntriangleright}\backslash\text{textntriangleright}$
 21212 $\backslash\text{let}\backslash\text{ntrianglelefteq}\backslash\text{textntrianglelefteq}$
 21213 $\backslash\text{let}\backslash\text{ntrianglerighteq}\backslash\text{textntrianglerighteq}$
 21214 $\backslash\text{let}\backslash\text{vdots}\backslash\text{textvdots}$
 21215 $\backslash\text{let}\backslash\text{cdots}\backslash\text{textcdots}$
 21216 $\backslash\text{let}\backslash\text{udots}\backslash\text{textudots}$
 21217 $\backslash\text{let}\backslash\text{ddots}\backslash\text{textddots}$
 21218 $\backslash\text{let}\backslash\text{barin}\backslash\text{textbarin}$
 21219 $\backslash\text{let}\backslash\text{diameter}\backslash\text{textdiameter}$
 21220 $\backslash\text{let}\backslash\text{backneg}\backslash\text{textbackneg}$
 21221 $\backslash\text{let}\backslash\text{wasylozenge}\backslash\text{textwasylozenge}$
 21222 $\backslash\text{let}\backslash\text{invbackneg}\backslash\text{textinvbackneg}$
 21223 $\backslash\text{let}\backslash\text{clock}\backslash\text{textclock}$
 21224 $\backslash\text{let}\backslash\text{ulcorner}\backslash\text{textulcorner}$
 21225 $\backslash\text{let}\backslash\text{urcorner}\backslash\text{texturcorner}$
 21226 $\backslash\text{let}\backslash\text{llcorner}\backslash\text{textllcorner}$
 21227 $\backslash\text{let}\backslash\text{lrcorner}\backslash\text{textlrcorner}$
 21228 $\backslash\text{let}\backslash\text{frown}\backslash\text{textfrown}$
 21229 $\backslash\text{let}\backslash\text{smile}\backslash\text{textsmile}$
 21230 $\backslash\text{let}\backslash\text{Keyboard}\backslash\text{textKeyboard}$
 21231 $\backslash\text{let}\backslash\text{angle}\backslash\text{textangle}$
 21232 $\backslash\text{let}\backslash\text{rangle}\backslash\text{textrangle}$
 21233 $\backslash\text{let}\backslash\text{APLinv}\backslash\text{textAPLinv}$
 21234 $\backslash\text{let}\backslash\text{Tumbler}\backslash\text{textTumbler}$
 21235 $\backslash\text{let}\backslash\text{notslash}\backslash\text{textnotslash}$
 21236 $\backslash\text{let}\backslash\text{notbackslash}\backslash\text{textnotbackslash}$
 21237 $\backslash\text{let}\backslash\text{boxbackslash}\backslash\text{textboxbackslash}$
 21238 $\backslash\text{let}\backslash\text{APLleftarrowbox}\backslash\text{textAPLleftarrowbox}$
 21239 $\backslash\text{let}\backslash\text{APLrightarrowbox}\backslash\text{textAPLrightarrowbox}$

21240 \let\APLuparrowbox\textAPLuparrowbox
 21241 \let\APLdownarrowbox\textAPLdownarrowbox
 21242 \let\APLinput\textAPLinput
 21243 \let\Request\textRequest
 21244 \let\Beam\textBeam
 21245 \let\hexagon\texthexagon
 21246 \let\APLbox\textAPLbox
 21247 \let\ForwardToIndex\textForwardToIndex
 21248 \let\RewindToIndex\textRewindToIndex
 21249 \let\bbslash\textbbslash
 21250 \let\CircledA\textCircledA
 21251 \let\CleaningF\textCleaningF
 21252 \let\CleaningFF\textCleaningFF
 21253 \let\CleaningP\textCleaningP
 21254 \let\CleaningPP\textCleaningPP
 21255 \let\CuttingLine\textCuttingLine
 21256 \let\UParrow\textUParrow
 21257 \let\bigtriangleup\textbigtriangleup
 21258 \let\Forward\textForward
 21259 \let\triangleright\texttriangleright
 21260 \let\RHD\textRHD
 21261 \let\DOWNarrow\textDOWNarrow
 21262 \let\bigtriangledown\textbigtriangledown
 21263 \let\Rewind\textRewind
 21264 \let\triangleleft\texttriangleleft
 21265 \let\LHD\textLHD
 21266 \let\diamond\textdiamond
 21267 \let\lozenge\textlozenge
 21268 \let\LEFTCIRCLE\textLEFTCIRCLE
 21269 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21270 \let\openbullet\textopenbullet
 21271 \let\boxbar\textboxbar
 21272 \let\bigcircle\textbigcircle
 21273 \let\Cloud\textCloud
 21274 \let\FiveStar\textFiveStar
 21275 \let\FiveStarOpen\textFiveStarOpen
 21276 \let\Phone\textPhone
 21277 \let\boxempty\textboxempty
 21278 \let\Checkedbox\textCheckedbox
 21279 \let\Crossedbox\textCrossedbox
 21280 \let\Coffeecup\textCoffeecup
 21281 \let\HandCuffLeft\textHandCuffLeft
 21282 \let\HandCuffRight\textHandCuffRight
 21283 \let\HandLeft\textHandLeft
 21284 \let\HandRight\textHandRight
 21285 \let\Radioactivity\textRadioactivity
 21286 \let\Biohazard\textBiohazard
 21287 \let\Ankh\textAnkh
 21288 \let\YinYang\textYinYang
 21289 \let\frownie\textfrownie
 21290 \let\smiley\textsmiley
 21291 \let\blacksmiley\textblacksmiley
 21292 \let\sun\textsun
 21293 \let\leftmoon\textleftmoon
 21294 \let\rightmoon\textrightmoon
 21295 \let\mercury\textmercury
 21296 \let\earth\textearth

21297 \let\male\textmale
 21298 \let\jupiter\textjupiter
 21299 \let\saturn\textsaturn
 21300 \let\uranus\texturanus
 21301 \let\neptune\textneptune
 21302 \let\pluto\textpluto
 21303 \let\aries\textaries
 21304 \let\taurus\texttaurus
 21305 \let\gemini\textgemini
 21306 \let\cancer\textcancer
 21307 \let\leo\textleo
 21308 \let\virgo\textvirgo
 21309 \let\libra\textlibra
 21310 \let\scorpio\textscorpio
 21311 \let\sagittarius\textsagittarius
 21312 \let\capricornus\textcapricornus
 21313 \let\aquarius\textaquarius
 21314 \let\pisces\textpisces
 21315 \let\quarternote\textquarternote
 21316 \let\twonotes\texttwonotes
 21317 \let\sixteenthnote\textsixteenthnote
 21318 \let\flat\textflat
 21319 \let\natural\textnatural
 21320 \let\sharp\textsharp
 21321 \let\recycle\textrecycle
 21322 \let\Wheelchair\textWheelchair
 21323 \let\Flag\textFlag
 21324 \let\MineSign\textMineSign
 21325 \let\ds\textds
 21326 \let\dsmedical\textdsmedical
 21327 \let\dsjuridical\textdsjuridical
 21328 \let\dschemical\textdschemical
 21329 \let\dsbiological\textdsbiological
 21330 \let\dscommercial\textdscommercial
 21331 \let\manstar\textmanstar
 21332 \let\danger\textdanger
 21333 \let\FemaleFemale\textFemaleFemale
 21334 \let\MaleMale\textMaleMale
 21335 \let\FemaleMale\textFemaleMale
 21336 \let\Hermaphrodite\textHermaphrodite
 21337 \let\Neutral\textNeutral
 21338 \let\hexstar\texthexstar
 21339 \let\SunCload\textSunCload
 21340 \let\Rain\textRain
 21341 \let\noway\textnoway
 21342 \let\Mountain\textMountain
 21343 \let\Tent\textTent
 21344 \let\ScissorRight\textScissorRight
 21345 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21346 \let\ScissorHollowRight\textScissorHollowRight
 21347 \let\PhoneHandset\textPhoneHandset
 21348 \let\Tape\textTape
 21349 \let\Plane\textPlane
 21350 \let\Envelope\textEnvelope
 21351 \let\Peace\textPeace
 21352 \let\WritingHand\textWritingHand
 21353 \let\PencilRightDown\textPencilRightDown

21354 \let\PencilRight\textPencilRight
 21355 \let\PencilRightUp\textPencilRightUp
 21356 \let\NibRight\textNibRight
 21357 \let\NibSolidRight\textNibSolidRight
 21358 \let\Checkmark\textCheckmark
 21359 \let\CheckmarkBold\textCheckmarkBold
 21360 \let\XSolid\textXSolid
 21361 \let\XSolidBold\textXSolidBold
 21362 \let\XSolidBrush\textXSolidBrush
 21363 \let\PlusOutline\textPlusOutline
 21364 \let\Plus\textPlus
 21365 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21366 \let\PlusCenterOpen\textPlusCenterOpen
 21367 \let\Cross\textCross
 21368 \let\CrossOpenShadow\textCrossOpenShadow
 21369 \let\CrossOutline\textCrossOutline
 21370 \let\CrossMaltese\textCrossMaltese
 21371 \let\DavidStar\textDavidStar
 21372 \let\FourAsterisk\textFourAsterisk
 21373 \let\JackStar\textJackStar
 21374 \let\JackStarBold\textJackStarBold
 21375 \let\ClowerTips\textClowerTips
 21376 \let\FourStar\textFourStar
 21377 \let\FourStarOpen\textFourStarOpen
 21378 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21379 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21380 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21381 \let\FiveStarOutline\textFiveStarOutline
 21382 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21383 \let\FiveStarConvex\textFiveStarConvex
 21384 \let\FiveStarShadow\textFiveStarShadow
 21385 \let\AsteriskBold\textAsteriskBold
 21386 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21387 \let\EightStarTaper\textEightStarTaper
 21388 \let\EightStarConvex\textEightStarConvex
 21389 \let\SixStar\textSixStar
 21390 \let\EightStar\textEightStar
 21391 \let\EightStarBold\textEightStarBold
 21392 \let\TwelveStar\textTwelveStar
 21393 \let\SixteenStarLight\textSixteenStarLight
 21394 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21395 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21396 \let\Asterisk\textAsterisk
 21397 \let\SixFlowerAlternate\textSixFlowerAlternate
 21398 \let\FiveFlowerPetal\textFiveFlowerPetal
 21399 \let\FiveFlowerOpen\textFiveFlowerOpen
 21400 \let\EightFlowerPetal\textEightFlowerPetal
 21401 \let\SunshineOpenCircled\textSunshineOpenCircled
 21402 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21403 \let\SnowflakeChevron\textSnowflakeChevron
 21404 \let\Snowflake\textSnowflake
 21405 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21406 \let\Sparkle\textSparkle
 21407 \let\SparkleBold\textSparkleBold
 21408 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21409 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21410 \let\EightAsterisk\textEightAsterisk

21411 \let\CircleShadow\textCircleShadow
 21412 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21413 \let\SquareTopRight\textSquareTopRight
 21414 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21415 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21416 \let\DiamandSolid\textDiamandSolid
 21417 \let\RectangleThin\textRectangleThin
 21418 \let\Rectangle\textRectangle
 21419 \let\RectangleBold\textRectangleBold
 21420 \let\perp\textperp
 21421 \let\notperp\textnotperp
 21422 \let\veedot\textveedot
 21423 \let\wedgedot\textwedgedot
 21424 \let\leftspoon\textleftspoon
 21425 \let\lbrackdbl\textlbrackdbl
 21426 \let\rbrackdbl\textrbrackdbl
 21427 \let\circlearrowleft\textcirclearrowleft
 21428 \let\circlearrowright\textcirclearrowright
 21429 \let\longleftarrow\textlongleftarrow
 21430 \let\longrightarrow\textlongrightarrow
 21431 \let\longleftrightarrow\textlongleftrightarrow
 21432 \let\Longleftarrow\textLongleftarrow
 21433 \let\Longrightarrow\textLongrightarrow
 21434 \let\Longleftrightarrow\textLongleftrightarrow
 21435 \let\longmapsto\textlongmapsto
 21436 \let\Longmapsfrom\textLongmapsfrom
 21437 \let\Longmapsto\textLongmapsto
 21438 \let\nwsearrow\textnwsearrow
 21439 \let\neswarrow\textneswarrow
 21440 \let\hookrightarrow\texthookrightarrow
 21441 \let\rhookrightarrow\texthookrightarrow
 21442 \let\hookrightarrow\texthookrightarrow
 21443 \let\rhookrightarrow\texthookrightarrow
 21444 \let\leadsto\textleadsto
 21445 \let\curvearrowright\textcurvearrowright
 21446 \let\curvearrowleft\textcurvearrowleft
 21447 \let\curvearrowright\textcurvearrowright
 21448 \let\curvearrowright\textcurvearrowright
 21449 \let\curvearrowdown\textcurvearrowdown
 21450 \let\curvearrowdown\textcurvearrowdown
 21451 \let\curvearrowleft\textcurvearrowleft
 21452 \let\curvearrowright\textcurvearrowright
 21453 \let\leftrightharpoon\textleftrightharpoon
 21454 \let\rightleftharpoon\textrightleftharpoon
 21455 \let\updownharpoonrightleft\textupdownharpoonrightleft
 21456 \let\updownharpoonleftright\textupdownharpoonleftright
 21457 \let\leftleftharpoons\textleftleftharpoons
 21458 \let\upupharpoons\textupupharpoons
 21459 \let\righttrightharpoons\textrighttrightharpoons
 21460 \let\downdownharpoons\textdowndownharpoons
 21461 \let\leftbarharpoon\textleftbarharpoon
 21462 \let\barleftharpoon\textbarleftharpoon
 21463 \let\rightbarharpoon\textrightbarharpoon
 21464 \let\barrightharpoon\textbarrightharpoon
 21465 \let\updownharpoons\textupdownharpoons
 21466 \let\downupharpoons\textdownupharpoons
 21467 \let\moo\textmoo

21468 $\backslash\mathrm{llparentesis}\text{llparentesis}$
 21469 $\backslash\mathrm{rrparentesis}\text{rrparentesis}$
 21470 $\backslash\mathrm{invdiameter}\text{invdiameter}$
 21471 $\backslash\mathrm{obar}\text{toobar}$
 21472 $\backslash\mathrm{obslash}\text{toobslash}$
 21473 $\backslash\mathrm{obot}\text{toobot}$
 21474 $\backslash\mathrm{NoChemicalCleaning}\text{NoChemicalCleaning}$
 21475 $\backslash\mathrm{olessthan}\text{toolessthan}$
 21476 $\backslash\mathrm{ogreaterthan}\text{toglereaterthan}$
 21477 $\backslash\mathrm{boxslash}\text{toboxslash}$
 21478 $\backslash\mathrm{boxbslash}\text{toboxbslash}$
 21479 $\backslash\mathrm{boxast}\text{toboxast}$
 21480 $\backslash\mathrm{boxcircle}\text{toboxcircle}$
 21481 $\backslash\mathrm{boxbox}\text{toboxbox}$
 21482 $\backslash\mathrm{Valve}\text{Valve}$
 21483 $\backslash\mathrm{multimapboth}\text{multimapboth}$
 21484 $\backslash\mathrm{shuffle}\text{toshuffle}$
 21485 $\backslash\mathrm{uplus}\text{toupplus}$
 21486 $\backslash\mathrm{bigdoublewedge}\text{tobigdoublewedge}$
 21487 $\backslash\mathrm{bigdoublevee}\text{tobigdoublevee}$
 21488 $\backslash\mathrm{Join}\text{Join}$
 21489 $\backslash\mathrm{fatsemi}\text{tofatsemi}$
 21490 $\backslash\mathrm{circplus}\text{tocircplus}$
 21491 $\backslash\mathrm{minusdot}\text{to minusdot}$
 21492 $\backslash\mathrm{dottimes}\text{toddottimes}$
 21493 $\backslash\mathrm{dtimes}\text{toddimes}$
 21494 $\backslash\mathrm{odiv}\text{todiv}$
 21495 $\backslash\mathrm{invneg}\text{toinvneg}$
 21496 $\backslash\mathrm{sqdoublecap}\text{tosqdoublecap}$
 21497 $\backslash\mathrm{capdot}\text{tocapdot}$
 21498 $\backslash\mathrm{sqdoublecup}\text{tosqdoublecup}$
 21499 $\backslash\mathrm{doublewedge}\text{toublewedge}$
 21500 $\backslash\mathrm{doublevee}\text{toublevee}$
 21501 $\backslash\mathrm{doublebarwedge}\text{toublebarwedge}$
 21502 $\backslash\mathrm{veedoublebar}\text{toveedoublebar}$
 21503 $\backslash\mathrm{eqdot}\text{toeqdot}$
 21504 $\backslash\mathrm{neqdot}\text{toneqdot}$
 21505 $\backslash\mathrm{coloncolonequals}\text{to coloncolonequals}$
 21506 $\backslash\mathrm{leqslant}\text{toleqslant}$
 21507 $\backslash\mathrm{nleqslant}\text{tonleqslant}$
 21508 $\backslash\mathrm{geqslant}\text{to geqslant}$
 21509 $\backslash\mathrm{ngeqslant}\text{tongeqslant}$
 21510 $\backslash\mathrm{lessapprox}\text{tolessapprox}$
 21511 $\backslash\mathrm{nlessapprox}\text{tonlessapprox}$
 21512 $\backslash\mathrm{gtrapprox}\text{togtrapprox}$
 21513 $\backslash\mathrm{ngtrapprox}\text{tongtrapprox}$
 21514 $\backslash\mathrm{ineq}\text{toineq}$
 21515 $\backslash\mathrm{gneq}\text{to gneq}$
 21516 $\backslash\mathrm{lnapprox}\text{tolnapprox}$
 21517 $\backslash\mathrm{gnapprox}\text{to gnapprox}$
 21518 $\backslash\mathrm{lesseqqgtr}\text{tolesseqqgtr}$
 21519 $\backslash\mathrm{gtreqqlless}\text{to gtreqqlless}$
 21520 $\backslash\mathrm{eqslantless}\text{toeqslantless}$
 21521 $\backslash\mathrm{eqslantgtr}\text{toeqslantgtr}$
 21522 $\backslash\mathrm{leftslice}\text{toleftslice}$
 21523 $\backslash\mathrm{rightslice}\text{torightslice}$
 21524 $\backslash\mathrm{preceq}\text{topreced}$

21525 \let\npreceq\textnpreceq
 21526 \let\succeq\textsucceq
 21527 \let\nsucceq\textnsucceq
 21528 \let\precneq\textprecneq
 21529 \let\succneq\textsuccneq
 21530 \let\preceqq\textpreceqq
 21531 \let\npreceqq\textnpreceqq
 21532 \let\succeqq\textsucceqq
 21533 \let\nsucceqq\textnsucceqq
 21534 \let\precneqq\textprecneqq
 21535 \let\succneqq\textsuccneqq
 21536 \let\precapprox\textprecapprox
 21537 \let\nprecapprox\textnprecapprox
 21538 \let\succapprox\textsuccapprox
 21539 \let\nsuccapprox\textnsuccapprox
 21540 \let\precnapprox\textprecnapprox
 21541 \let\succnapprox\textsuccnapprox
 21542 \let\subseteqq\textsubseteqq
 21543 \let\nsubseteqq\textnsubseteqq
 21544 \let\supseteqq\textsupseteqq
 21545 \let\nsupseteqq\textnsupseteqq
 21546 \let\dashV\textdashV
 21547 \let\ndashV\textndashV
 21548 \let\Dashv\textDashv
 21549 \let\ndashv\textndashv
 21550 \let\DashV\textDashV
 21551 \let\ndashV\textndashV
 21552 \let\downmodels\textdownmodels
 21553 \let\ndownmodels\textndownmodels
 21554 \let\upmodels\textupmodels
 21555 \let\nupmodels\textnupmodels
 21556 \let\upspoon\textupspoon
 21557 \let\interleave\textinterleave
 21558 \let\slash\textslash
 21559 \let\pentagon\textpentagon
 21560 \let\varhexagon\textvarhexagon
 21561 \let\jinferior\textjinferior
 21562 \let\slashdiv\textslashdiv
 21563 \let\fivedots\textfivedots
 21564 \let\oo\textoo
 21565 \let\GaPa\textGaPa
 21566 \let\HaPa\textHaPa
 21567 \let\ViPa\textViPa
 21568 \let\AcPa\textAcPa
 21569 \let\SePa\textSePa
 21570 \let\ZwPa\textZwPa
 21571 \let\fullnote\textfullnote
 21572 \let\halfnote\texthalfnote
 21573 \let\Vier\textVier
 21574 \let\Acht\textAcht
 21575 \let\Sech\textSech
 21576 \let\Zwdr\textZwdr
 21577 \let\Mundus\textMundus
 21578 \let\Moon\textMoon
 21579 \let\ManFace\textManFace
 21580 \let\WomanFace\textWomanFace
 21581 \let\Fax\textFax

21582 \let\Fire\textFire
 21583 \let\Bicycle\textBicycle
 21584 \let\Gentsroom\textGentsroom
 21585 \let\Ladiesroom\textLadiesroom
 21586 \let\ccnc\textccnc
 21587 \let\ccsa\textccsa
 21588 \let\Info\textInfo
 21589 \let\CESign\textCESign
 21590 \let\neg\textneg
 21591 \let\times\texttimes
 21592 \let\div\textdiv
 21593 \let\pm\textpm
 21594 \let\cdot\textcdot
 21595 }% \psdmapshortnames
 21596 \newcommand*{\psdaliasnames}{%
 21597 \let\epsdice\HyPsd@DieFace
 21598 \let\fcdice\HyPsd@DieFace
 21599 \let\MoonPha\HyPsd@MoonPha
 21600 \let\mathdollar\textdollar
 21601 \let\EyesDollar\textdollar
 21602 \let\binampersand\textampersand
 21603 \let\with\textampersand
 21604 \let\mathunderscore\textunderscore
 21605 \let\textvertline\textbar
 21606 \let\mathsterling\textsterling
 21607 \let\pounds\textsterling
 21608 \let\brokenvert\textbrokenbar
 21609 \let\mathsection\textsection
 21610 \let\S\textsection
 21611 \let\mathparagraph\textparagraph
 21612 \let\MultiplicationDot\textperiodcentered
 21613 \let\Squaredot\textperiodcentered
 21614 \let\vartimes\textmultiply
 21615 \let\MVMultiplication\textmultiply
 21616 \let\eth\dh
 21617 \let\crossd\textcrd
 21618 \let\textbard\textcrd
 21619 \let\bard\textcrd
 21620 \let\textcrh\textthbar
 21621 \let\crossh\textthbar
 21622 \let\planck\textthbar
 21623 \let\eng\ng
 21624 \let\engma\ng
 21625 \let\crossb\textcrb
 21626 \let\textbarb\textcrb
 21627 \let\barb\textcrb
 21628 \let\Florin\textflorin
 21629 \let\hv\texthvl
 21630 \let\hausak\texthtk
 21631 \let\crossnilambda\textcrlambda
 21632 \let\barlambda\textcrlambda
 21633 \let\lambdabar\textcrlambda
 21634 \let\lambdash\textcrlambda
 21635 \let\textnrleg\textPUnrleg
 21636 \let\textpipevar\textpipe
 21637 \let\textdoublepipevar\textdoublepipe
 21638 \let\textdoublebarpipevar\textdoublebarpipe

21639 \let\textcrg\textgslash
 21640 \let\textdblig\textPUdblig
 21641 \let\textqplig\textPUqplig
 21642 \let\textcentoldstyle\textslashc
 21643 \let\textbarc\textslashc
 21644 \let\inva\textturna
 21645 \let\vara\textscripta
 21646 \let\invscripta\textturnscripta
 21647 \let\rotvara\textturnscripta
 21648 \let\hookb\texthtb
 21649 \let\hausab\texthtb
 21650 \let\varopeno\textopeno
 21651 \let\curlyc\textctc
 21652 \let\taild\textrtaild
 21653 \let\hookd\texthtd
 21654 \let\hausad\texthtd
 21655 \let\er\textrhooschwa
 21656 \let\epsi\textniepsilon
 21657 \let\hookrevepsilon\textrhooschwa
 21658 \let\closedrevepsilon\textclosepsilon
 21659 \let\barj\textbardotlessj
 21660 \let\hookg\texthtg
 21661 \let\varg\textscriptg
 21662 \let\vod\textipagamma
 21663 \let\invh\textturnh
 21664 \let\udesc\textturnh
 21665 \let\hookh\texthth
 21666 \let\voicedh\texthth
 21667 \let\hookheng\texththeng
 21668 \let\ibar\textbari
 21669 \let\vari\textniota
 21670 \let\tildel\texttilde
 21671 \let\latfric\textbeltl
 21672 \let\tail\textrtail
 21673 \let\lz\textlyoghlig
 21674 \let\invm\textturnm
 21675 \let\rotm\textturnm
 21676 \let\legm\textturnmrleg
 21677 \let\labdentalnas\textltailm
 21678 \let\emgma\textltailm
 21679 \let\nj\textltailn
 21680 \let\enya\textltailn
 21681 \let\tailn\textrtailn
 21682 \let\closedniomega\textcloseomega
 21683 \let\varomega\textcloseomega
 21684 \let\invr\textturnr
 21685 \let\rotr\textturnr
 21686 \let\invlegr\textturnlonglegr
 21687 \let\tailinvr\textturnrrtail
 21688 \let\legr\textlonglegr
 21689 \let\tailr\textrtailr
 21690 \let\flapr\textfishhookr
 21691 \let\flap\textfishhookr
 21692 \let\tails\textrtails
 21693 \let\curlyesh\textctesh
 21694 \let\clickt\textturnt
 21695 \let\tailt\textrtailt

21696 \let\ubar\textbaru
 21697 \let\rotOmega\textniupsilon
 21698 \let\invv\textturnv
 21699 \let\pwedge\textturnv
 21700 \let\invw\textturnw
 21701 \let\rotw\textturnw
 21702 \let\invy\textturny
 21703 \let\roty\textturny
 21704 \let\tailz\textrtailz
 21705 \let\curlyz\textctz
 21706 \let\curlyyogh\textctyogh
 21707 \let\ejective\textglotstop
 21708 \let\glottal\textglotstop
 21709 \let\reveject\textrevglotstop
 21710 \let\clickc\textstretchc
 21711 \let\textstretchcvar\textstretchc
 21712 \let\clickb\textbullseye
 21713 \let\textObullseye\textbullseye
 21714 \let\textctjvar\textctj
 21715 \let\textturnsck\textturnk
 21716 \let\dz\textdzlig
 21717 \let\tesh\textteshlig
 21718 \let\digamma\textdigammagreek
 21719 \let\hardsign\cyrhrdsn
 21720 \let\softsign\cyrsoftsn
 21721 \let\hebsin\hebshin
 21722 \let\textsck\textPUscK
 21723 \let\textscm\textPUscm
 21724 \let\textscp\textPUscp
 21725 \let\textrevscr\textPUrevscr
 21726 \let\textrhoKa\textPURhooka
 21727 \let\textrhoKe\textPURhooke
 21728 \let\textrhoKepsilon\textPURhookepsilon
 21729 \let\textrhoKopeno\textPURhookopeno
 21730 \let\textdoublevertline\textbardbl
 21731 \let\dag\textdagger
 21732 \let\ddagger\textdaggerdbl
 21733 \let\ddag\textdaggerdbl
 21734 \let\mathellipsis\textellipsis
 21735 \let\EurDig\texteuro
 21736 \let\EURdig\texteuro
 21737 \let\EurHv\texteuro
 21738 \let\EURhv\texteuro
 21739 \let\EurCr\texteuro
 21740 \let\EURcr\texteuro
 21741 \let\EurTm\texteuro
 21742 \let\EURtm\texteuro
 21743 \let\Eur\texteuro
 21744 \let\Denarius\textDeleatur
 21745 \let\agemO\textmho
 21746 \let\EstimatedSign\textestimated
 21747 \let\Ecommerce\textestimated
 21748 \let\bindnasrepma\textinvamp
 21749 \let\parr\textinvamp
 21750 \let\MVRightArrow\textrightarrow
 21751 \let\MVRightarrow\textrightarrow
 21752 \let\MVArrowDown\textdownarrow

21753 $\backslash\text{let}\backslash\text{Force}\backslash\text{textdownarrow}$
 21754 $\backslash\text{let}\backslash\text{textglobrise}\backslash\text{textnearrow}$
 21755 $\backslash\text{let}\backslash\text{textglobfall}\backslash\text{textsearrow}$
 21756 $\backslash\text{let}\backslash\text{Lightning}\backslash\text{textlightning}$
 21757 $\backslash\text{let}\backslash\text{Conclusion}\backslash\text{textRightarrow}$
 21758 $\backslash\text{let}\backslash\text{dashedleftarrow}\backslash\text{texdashleftarrow}$
 21759 $\backslash\text{let}\backslash\text{dashedrightarrow}\backslash\text{texdashrightarrow}$
 21760 $\backslash\text{let}\backslash\text{varnothing}\backslash\text{textemptyset}$
 21761 $\backslash\text{let}\backslash\text{owns}\backslash\text{textni}$
 21762 $\backslash\text{let}\backslash\text{notni}\backslash\text{textnotowner}$
 21763 $\backslash\text{let}\backslash\text{varprop}\backslash\text{textpropto}$
 21764 $\backslash\text{let}\backslash\text{varangle}\backslash\text{textsphericalangle}$
 21765 $\backslash\text{let}\backslash\text{Anglesign}\backslash\text{textsphericalangle}$
 21766 $\backslash\text{let}\backslash\text{AngleSign}\backslash\text{textsphericalangle}$
 21767 $\backslash\text{let}\backslash\text{notdivides}\backslash\text{textnmid}$
 21768 $\backslash\text{let}\backslash\text{varowedge}\backslash\text{textowedge}$
 21769 $\backslash\text{let}\backslash\text{varovee}\backslash\text{textovee}$
 21770 $\backslash\text{let}\backslash\text{varint}\backslash\text{textint}$
 21771 $\backslash\text{let}\backslash\text{varoint}\backslash\text{textoint}$
 21772 $\backslash\text{let}\backslash\text{downtherefore}\backslash\text{textbecause}$
 21773 $\backslash\text{let}\backslash\text{textdotdiv}\backslash\text{textdotminus}$
 21774 $\backslash\text{let}\backslash\text{AC}\backslash\text{textsim}$
 21775 $\backslash\text{let}\backslash\text{wreath}\backslash\text{textwr}$
 21776 $\backslash\text{let}\backslash\text{nthickapprox}\backslash\text{texnapprox}$
 21777 $\backslash\text{let}\backslash\text{VHF}\backslash\text{texttriplesim}$
 21778 $\backslash\text{let}\backslash\text{notasympt}\backslash\text{texnasymp}$
 21779 $\backslash\text{let}\backslash\text{Doteq}\backslash\text{textdoteqdot}$
 21780 $\backslash\text{let}\backslash\text{corresponds}\backslash\text{texthateq}$
 21781 $\backslash\text{let}\backslash\text{Corresponds}\backslash\text{texthateq}$
 21782 $\backslash\text{let}\backslash\text{nequal}\backslash\text{textneq}$
 21783 $\backslash\text{let}\backslash\text{Congruent}\backslash\text{textequiv}$
 21784 $\backslash\text{let}\backslash\text{NotCongruent}\backslash\text{textnequiv}$
 21785 $\backslash\text{let}\backslash\text{notequiv}\backslash\text{textnequiv}$
 21786 $\backslash\text{let}\backslash\text{LessOrEqual}\backslash\text{textleq}$
 21787 $\backslash\text{let}\backslash\text{LargerOrEqual}\backslash\text{textgeq}$
 21788 $\backslash\text{let}\backslash\text{apprle}\backslash\text{textlessim}$
 21789 $\backslash\text{let}\backslash\text{apprge}\backslash\text{textgtrsim}$
 21790 $\backslash\text{let}\backslash\text{varoplus}\backslash\text{textoplus}$
 21791 $\backslash\text{let}\backslash\text{varominus}\backslash\text{textominus}$
 21792 $\backslash\text{let}\backslash\text{varotimes}\backslash\text{textotimes}$
 21793 $\backslash\text{let}\backslash\text{varoslash}\backslash\text{textoslash}$
 21794 $\backslash\text{let}\backslash\text{varodot}\backslash\text{textodot}$
 21795 $\backslash\text{let}\backslash\text{ocirc}\backslash\text{textcircledcirc}$
 21796 $\backslash\text{let}\backslash\text{varocircle}\backslash\text{textcircledcirc}$
 21797 $\backslash\text{let}\backslash\text{varoast}\backslash\text{textcircledast}$
 21798 $\backslash\text{let}\backslash\text{oasterisk}\backslash\text{textcircledast}$
 21799 $\backslash\text{let}\backslash\text{rightvdash}\backslash\text{textvdash}$
 21800 $\backslash\text{let}\backslash\text{leftvdash}\backslash\text{texdashv}$
 21801 $\backslash\text{let}\backslash\text{nleftvdash}\backslash\text{textndashv}$
 21802 $\backslash\text{let}\backslash\text{downvdash}\backslash\text{texttop}$
 21803 $\backslash\text{let}\backslash\text{upvdash}\backslash\text{textbot}$
 21804 $\backslash\text{let}\backslash\text{nperp}\backslash\text{textnupvdash}$
 21805 $\backslash\text{let}\backslash\text{models}\backslash\text{textvDash}$
 21806 $\backslash\text{let}\backslash\text{rightmodels}\backslash\text{textvDash}$
 21807 $\backslash\text{let}\backslash\text{rightVdash}\backslash\text{textVdash}$
 21808 $\backslash\text{let}\backslash\text{rightModels}\backslash\text{textVdash}$
 21809 $\backslash\text{let}\backslash\text{nrightvdash}\backslash\text{textnvdash}$

21810 \let\nrightmodels\textnvDash
 21811 \let\nmodels\textnvDash
 21812 \let\nrightVdash\textnVdash
 21813 \let\nrightModels\textnVDash
 21814 \let\lessclosed\textlhd
 21815 \let\gtrclosed\textrhd
 21816 \let\leqclosed\textunlhd
 21817 \let\trianglelefteq\textunlhd
 21818 \let\geqclosed\textunrhd
 21819 \let\trianglerighteq\textunrhd
 21820 \let\Bowtie\textbowtie
 21821 \let\varcurlyvee\textcurlyvee
 21822 \let\varcurlywedge\textcurlywedge
 21823 \let\doublecap\textCap
 21824 \let\doublecup\textCup
 21825 \let\varsqsubsetneq\textsqsubsetneq
 21826 \let\varsqsupsetneq\textsqsupsetneq
 21827 \let\nlessclosed\textntriangleleft
 21828 \let\ngtrclosed\textntriangleright
 21829 \let\Clocklogo\textclock
 21830 \let\ClockLogo\textclock
 21831 \let\baro\textstmaryrdbaro
 21832 \let\varparallelinv\textbbslash
 21833 \let\CleaningA\textCircledA
 21834 \let\Kutline\textCuttingLine
 21835 \let\CutLine\textCuttingLine
 21836 \let\Cutline\textCuttingLine
 21837 \let\MoveUp\textUParrow
 21838 \let\APLup\textbigtriangleup
 21839 \let\Bleech\textbigtriangleup
 21840 \let\MoveDown\textDOWNarrow
 21841 \let\APLdown\textbigtriangledown
 21842 \let\Diamond\textdiamond
 21843 \let\varbigcirc\textbigcircle
 21844 \let\Telefon\textPhone
 21845 \let\Box\textboxempty
 21846 \let\CheckedBox\textCheckedbox
 21847 \let\XBox\textCrossedbox
 21848 \let\CrossedBox\textCrossedbox
 21849 \let\rightpointleft\textHandLeft
 21850 \let\leftpointright\textHandRight
 21851 \let\PointingHand\textHandRight
 21852 \let\Pointinghand\textHandRight
 21853 \let\Radiation\textRadioactivity
 21854 \let\Yinyang\textYinYang
 21855 \let\YingYang\textYinYang
 21856 \let\Yingyang\textYinYang
 21857 \let\Frowny\textfrownie
 21858 \let\Smiley\textsmiley
 21859 \let\Sun\textsun
 21860 \let\Mercury\textmercury
 21861 \let\textfemale\textPUfemale
 21862 \let\female\textPUfemale
 21863 \let\venus\textPUfemale
 21864 \let\Venus\textPUfemale
 21865 \let\Female\textPUfemale
 21866 \let\Earth\textearth

21867 \let\mars\textmale
 21868 \let\Mars\textmale
 21869 \let\Male\textmale
 21870 \let\Jupiter\textjupiter
 21871 \let\Saturn\textsaturn
 21872 \let\Uranus\texturanus
 21873 \let\Neptune\textneptune
 21874 \let\Pluto\textpluto
 21875 \let\Aries\textaries
 21876 \let\Taurus\texttaurus
 21877 \let\Gemini\textgemini
 21878 \let\Cancer\textcancer
 21879 \let\Leo\textleo
 21880 \let\Virgo\textvirgo
 21881 \let\Libra\textlibra
 21882 \let\Scorpio\textscorpio
 21883 \let\Sagittarius\textsagittarius
 21884 \let\Capricorn\textcapricornus
 21885 \let\Aquarius\textaquarius
 21886 \let\Pisces\textpisces
 21887 \let\spadesuit\textspadesuitblack
 21888 \let\Heart\textheartsuitwhite
 21889 \let\heartsuit\textheartsuitwhite
 21890 \let\diamondsuit\textdiamondsuitwhite
 21891 \let\clubsuit\textclubsuitblack
 21892 \let\ eighthnote\textmusicalnote
 21893 \let\Recycling\textrecycle
 21894 \let\VarFlag\textFlag
 21895 \let\textxswup\textdsmilitary
 21896 \let\textuncrfemale\textPUuncrfemale
 21897 \let\Football\textSoccerBall
 21898 \let\CutLeft\textScissorRightBrokenBottom
 21899 \let\Cutright\textScissorRightBrokenBottom
 21900 \let\RightScissors\textScissorRight
 21901 \let\Leftscissors\textScissorRight
 21902 \let\Letter\textEnvelope
 21903 \let\Writinghand\textWritingHand
 21904 \let\checkmark\textCheckmark
 21905 \let\davidstar\textDavidStar
 21906 \let\llbracket\textlbrackdbl
 21907 \let\rrbracket\textrrbrackdbl
 21908 \let\RightTorque\textlcurvearrowdown
 21909 \let\Righttorque\textlcurvearrowdown
 21910 \let\LeftTorque\textrcurvearrowdown
 21911 \let\Lefttorque\textrcurvearrowdown
 21912 \let\textvarobar\textobar
 21913 \let\circledbslash\textobslash
 21914 \let\obackslash\textobslash
 21915 \let\varobslash\textobslash
 21916 \let\odplus\textobot
 21917 \let\varolessthan\textolessthan
 21918 \let\varogreaterthan\textogreaterthan
 21919 \let\divdot\textminusdot
 21920 \let\doublesqcap\textsquaddoublecap
 21921 \let\doublesqcup\textsquaddoublecup
 21922 \let\merge\textdoublevee
 21923 \let\leftVdash\textdashV


```

21924 \let\nleftVdash\textndashV
21925 \let\leftmodels\textDashv
21926 \let\nleftmodels\textnDashv
21927 \let\leftModels\textDashV
21928 \let\nleftModels\textnDashV
21929 \let\varparallel\textsslash
21930 \let\textheng\textPUheng
21931 \let\textlhookfour\textPUlhookfour
21932 \let\textscf\textPUscf
21933 \let\textao lig\textPUaolig
21934 \let\Ganz\textfullnote
21935 \let\Halb\texthalfnote
21936 \let\Womanface\textWomanFace
21937 \let\Faxmachine\textFax
21938 \let\CEsign\textCESign
21939 }% \psdaliasnames
21940 </psdextra>

```

52 End of file hyccheck.tex

```

21941 <*check>
21942 \typeout{}
21943 \begin{document}
21944 \end{document}
21945 </check>

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