

Hypertext marks in \LaTeX

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<https://github.com/latex3/hyperref/issues>

2019/11/06 v7.00b

1 Documentation overview for `hyperref`

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

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3 File hyccheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX 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 \LaTeX '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
232 \RequirePackage{ltxcmds}[2010/11/12]
233 \RequirePackage{iftex}[2019/10/24]
234 \RequirePackage{pdftexcmds}[2009/04/10]
235 \@ifpackagelater{pdftexcmds}{2010/11/04}{\}%
236 \ltx@ifundefined{pdfdraftmode}{\%
237 \let\pdf@ifdraftmode\ltx@secondoftwo
238 }{\%
239 \ifpdf
240 \def\pdf@ifdraftmode{\%
241 \ifnum\pdfdraftmode=\ltx@one
242 \expandafter\ltx@firstoftwo
243 \else
244 \expandafter\ltx@secondoftwo
245 \fi
246 }%
247 \else
248 \let\pdf@ifdraftmode\ltx@secondoftwo
249 \fi
250 }%
251 }

252 \RequirePackage{infwarerr}[2010/04/08]
253 \RequirePackage{keyval}[1997/11/10]
254 \RequirePackage{kvsetkeys}[2007/09/29]
255 \RequirePackage{kvdefinekeys}[2011/04/07]
256 \RequirePackage{pdfescape}[2007/11/11]
257 \RequirePackage{hycolor}
258 \RequirePackage{letltxmacro}[2008/06/13]
259 \RequirePackage{auxhook}[2009/12/14]
260 \def\Hy@Error{\@PackageError{hyperref}}
261 \def\Hy@Warning{\@PackageWarning{hyperref}}
262 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
263 \def\Hy@Info{\@PackageInfo{hyperref}}
264 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
265 \def\Hy@Message#1{\%

```

```

266 \GenericWarning{%
267   (hyperref)\@spaces\@spaces\@spaces\@spaces
268 }{%
269   Package hyperref Message: #1\ltx@gobble
270 }%
271 }

```

4.2 Version check

\Hy@VersionChecked

```

272 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

273 \def\Hy@VersionCheck#1{%
274   \begingroup
275   \ltx@ifundefined{ver@hyperref.sty}{%
276     \Hy@Error{%
277       This should not happen!\MessageBreak
278       Missing hyperref version%
279     }\@ehd
280   }{%
281     \ltx@ifundefined{ver@#1}{%
282       \Hy@Error{%
283         This should not happen!\MessageBreak
284         Missing version of `#1'%
285       }\@ehd
286     }{%
287       \def\x##1##2##3{%
288         \expandafter\expandafter\expandafter\Hy@@VersionCheck
289         \expandafter\expandafter\expandafter##2%
290         \csname ver@##3\endcsname##1##1\@nil
291       }%
292       \x{ }\y{hyperref.sty}%
293       \x{ }\z{#1}%
294       \ifx\y\z
295       \else
296         \edef\a{#1}%
297         \edef\b{\HyOpt@CustomDriver.def}%
298         \ifx\a\b
299           \Hy@WarningNoLine{%
300             Version mismatch (custom driver)!\MessageBreak
301             * \y: hyperref.sty\MessageBreak
302             * \z: \a
303           }%
304         \else
305           \Hy@Error{%
306             Version mismatch!\MessageBreak
307             * \y: hyperref.sty\MessageBreak
308             * \z: \a
309           }\@ehd
310         \fi
311       \fi
312     }%
313   }%
314   \endgroup
315   \chardef\Hy@VersionChecked=1 %
316 }

```

\Hy@@VersionCheck

```
317 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%  
318   \def#1{#2 #3}%  
319 }
```

4.3 Checks with regular expressions

```
320 \ltx@ifundefined{pdfmatch}{%  
321   \def\Hy@Match#1#2#3#4#5{%  
322   }{%  
323   \def\Hy@Match#1#2#3{%  
324     \begingroup  
325     \edef\~{\ltx@backslashchar\string~}%  
326     \edef\.{\ltx@backslashchar.}%  
327     \edef\[\{\ltx@backslashchar[]%  
328     \edef\${\ltx@backslashchar$}%  
329     \edef\(\{\ltx@backslashchar(%  
330     \edef\)\{\ltx@backslashchar)%  
331     \edef\|\{\ltx@backslashchar|}%  
332     \edef\*\{\ltx@backslashchar*}%  
333     \edef\+\{\ltx@backslashchar+}%  
334     \edef\?\{\ltx@backslashchar?}%  
335     \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%  
336     \edef\}\{\ltx@rightbracechar}%  
337     \edef\\{\ltx@backslashchar\ltx@backslashchar}%  
338     \let\ \ltx@space  
339     \ifcase\pdfmatch#2{#3}{#1} %  
340       \endgroup  
341       \expandafter\ltx@secondoftwo  
342     \or  
343       \endgroup  
344       \expandafter\ltx@firstoftwo  
345     \else  
346       \Hy@Warning{%  
347         Internal error: Wrong pattern!\MessageBreak  
348         --> #3 <--\MessageBreak  
349         Pattern check ignored%  
350       }%  
351       \endgroup  
352       \expandafter\ltx@firstoftwo  
353     \fi  
354   }%  
355 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%  
356   \begingroup  
357   \lccode`0=\{\relax  
358   \lowercase{\endgroup  
359   \def\ltx@leftbracechar{0}%  
360   }%  
361   \begingroup  
362   \lccode`0=\}\relax  
363   \lowercase{\endgroup  
364   \def\ltx@rightbracechar{0}%  
365   }%  
366 }%  
367 }
```

4.4 Compatibility with format dumps

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

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

```
368 \@ifundefined{AfterBeginDocument}{%
369   \def\AfterBeginDocument{\AtBeginDocument}%
370 }{}%
```

`\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.

```
371 \def\Hy@AtBeginDocument{%
372   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
373 }
```

`\Hy@AtEndOfPackage`

```
374 \def\Hy@AtEndOfPackage{%
375   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
376 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

```
379 \AtEndOfPackage{%
380   \Hy@AtEndOfPackageHook
381   \let\Hy@AtEndOfPackageHook\@undefined
382   \AfterBeginDocument{%
383     \Hy@AtBeginDocumentHook}%
384   \let\Hy@AtBeginDocumentHook\@undefined
385   }%
386 }
```

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

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

4.5 Switches

```
388 \newif\ifHy@stoppeearly
389 \newif\ifHy@typexml
390 \newif\ifHy@activeanchor
391 \newif\ifHy@backref
392 \newif\ifHy@bookmarks
393 \newif\ifHy@bookmarksnumbered
394 \newif\ifHy@bookmarksopen
395 \newif\ifHy@breaklinks
```

```

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

```

Defaults for the switches are now set.

```

439 \Hy@backreffalse
440 \Hy@bookmarksnumberedfalse
441 \Hy@bookmarksopenfalse
442 \Hy@bookmarksstrue
443 \Hy@breaklinksfalse
444 \Hy@pdfcenterwindowfalse
445 \Hy@CJKbookmarksfalse
446 \Hy@destlabelfalse
447 \Hy@pdfescapeformfalse
448 \Hy@hyperfiguresfalse
449 \Hy@pdffitwindowfalse
450 \Hy@hyperfootnotetrue
451 \Hy@hyperindextrue

```



```

452 \Hy@hypertextnamestrue
453 \Hy@implicittrue
454 \Hy@linktocpagefalse
455 \Hy@localanchornamefalse
456 \Hy@pdfmenubartrue
457 \Hy@naturalnamesfalse
458 \Hy@nestingfalse
459 \Hy@pdfnewwindowsetfalse
460 \Hy@pdfnewwindowfalse
461 \Hy@pageanchortrue
462 \Hy@pdfpagelabelstrue
463 \Hy@pdfpagehiddenfalse
464 \Hy@pdfstringfalse
465 \Hy@plainpagesfalse
466 \Hy@raiselinksfalse
467 \Hy@setpagesizetrue
468 \Hy@texhtfalse
469 \Hy@psdextrafalse
470 \Hy@pdftoolbartrue
471 \Hy@typexmlfalse
472 \Hy@unicodefalse
473 \Hy@pdfusetitlefalse
474 \Hy@verbosefalse
475 \Hy@pdfwindowuitrue
476 \Hy@pdfdisplaydoctitlefalse
477 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

480 \newdimen\@linkdim
481 \let\Hy@driver\ltx@empty
482 \let\MaybeStopEarly\relax
483 \newcount\Hy@linkcounter
484 \newcount\Hy@pagecounter
485 \Hy@linkcounter0
486 \Hy@pagecounter0

```

5.1 Macros for recursions

```

487 \let\Hy@ReturnEnd\@empty
488 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
489 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

\Hy@safe@activesfalse

```

490 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
491 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

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

`\hypercalcbp`

```
492 \begingroup\expandafter\expandafter\expandafter\endgroup
493 \expandafter\ifx\csname dimexpr\endcsname\relax
494   \def\hypercalcbpdef#1#2{%
495     \begingroup
496       \toks@{}%
497       \HyCal@scan#2\hypercalcbp\@nil
498     \expandafter\endgroup
499     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
500   }%
501   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
502     \toks@\expandafter{\the\toks@ #1}%
503     \ifx\#2\%
504       \else
505         \ltx@ReturnAfterFi{%
506           \HyCal@do#2\@nil
507         }%
508       \fi
509     }%
510   \def\HyCal@do#1#2\@nil{%
511     \@ifpackageloaded{calc}{%}{%
512       \Hy@Warning{%
513         For calculations \string\hypercalcbp\space needs\MessageBreak
514         package calc or e-TeX%
515       }%
516     }%
```

```

517 \setlength{\dimen@}{#1}%
518 \setlength{\dimen@}{0.99626401\dimen@}%
519 \edef\x{%
520   \toks@{%
521     \the\toks@
522     \strip@pt\dimen@
523   }%
524 } \x
525 \HyCal@scan#2\@nil
526 }%
527 \else
528 \def\hypercalcbp#1{%
529   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
530 }%
531 \def\hypercalcbpdef{\def}%
532 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

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

```
534 \begingroup
```

6.2.1 Preprocessing

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

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

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

```
535 \escapechar`\%
```

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

```
536 \edef\0{\string\0}%
537 \edef\1{\string\1}%
538 \edef\2{\string\2}%
539 \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.

```
540 \ifHy@unicode
541 \edef\8{\string\8}%
542 \edef\9{\string\9}%
```

```

543 \fontencoding{PU}%
544 \HyPsd@UTFviii
545 \def\ifpdfstringunicode##1##2{##1}%
546 \else
547 \fontencoding{PD1}%
548 \def\ifpdfstringunicode##1##2{##2}%
549 \fi
550 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
551 \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).

```

552 \@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).

```

553 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

554 \let\add@accent\HyPsd@add@accent

```

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

```

555 \let\{\textbraceleft
556 \let\}\textbraceright
557 \let\\\textbackslash
558 \let\#\textnumbersign
559 \let\$\textdollar
560 \let\%\textpercent
561 \let\&\textampersand
562 % \let\~\textasciitilde
563 \let\_ \textunderscore
564 \let\P\textparagraph
565 \let\ldots\textellipsis
566 \let\dots\textellipsis
567 \ltx@ifundefined{textEncodingNoboundary}%
568 {}{\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.

```
569 \def\{\pdfstringdefWarn\}%
570 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
571 \def\TeX{\TeX}%
572 \def\LaTeX{La\TeX}%
573 \def\LaTeXe{%
574   \LaTeX2%
575   \ifHy@unicode\textepsilon\else e\fi
576 }%
577 \def\eTeX{%
578   \ifHy@unicode\textepsilon\else e\fi
579   -\TeX%
580 }%
581 \def\SliTeX{Sli\TeX}%
582 \def\MF{Metafont}%
583 \def\MP{Metapost}%
```

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

```
584 \let\fontencoding\@gobble
585 \let\fontfamily\@gobble
586 \let\fontseries\@gobble
587 \let\fontshape\@gobble
588 \let\fontsize\@gobbletwo
589 \let\selectfont\@empty
590 \let\usefont\@gobblefour
591 \let\emph\@firstofone
592 \let\textnormal\@firstofone
593 \let\textrm\@firstofone
594 \let\textsf\@firstofone
595 \let\texttt\@firstofone
596 \let\textbf\@firstofone
597 \let\textmd\@firstofone
598 \let\textit\@firstofone
599 \let\textsc\@firstofone
600 \let\textsl\@firstofone
601 \let\textup\@firstofone
602 \let\normalfont\@empty
603 \let\rmfamily\@empty
604 \let\sffamily\@empty
605 \let\ttfamily\@empty
606 \let\bfseries\@empty
607 \let\mdseries\@empty
608 \let\itshape\@empty
609 \let\scshape\@empty
610 \let\slshape\@empty
611 \let\upshape\@empty
612 \let\em\@empty
```

```

613 \let\rm\@empty
614 \let\Huge\@empty
615 \let\LARGE\@empty
616 \let\Large\@empty
617 \let\footnotesize\@empty
618 \let\huge\@empty
619 \let\large\@empty
620 \let\normalsize\@empty
621 \let\scriptsize\@empty
622 \let\small\@empty
623 \let\tiny\@empty
624 \let\mathversion\@gobble
625 \let\phantom\@gobble
626 \let\vphantom\@gobble
627 \let\hphantom\@gobble

```

Package pifont.

```

628 \let\ding\HyPsd@ding
629 \let\Cube\HyPsd@DieFace
630 %* \HyPsd@DieFace -> \epsdice (epsdice)
631 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

632 \def\begin#1{\csname#1\endcsname}%
633 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

635 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
636 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

637 \ifHy@psdextra
638 \ifHy@unicode
639 \csname psdmapshortnames\endcsname
640 \csname psdaliasnames\endcsname
641 \fi
642 \fi

```

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

```

643 \let\foreignlanguage\@secondoftwo
644 \let\textlatin\@firstofone
645 \ltx@ifundefined{language@group}{\}%
646 \let\bbl@info\@gobble
647 \csname HyPsd@babel@\language@group\endcsname
648 }%
649 \HyPsd@GreekPatch
650 \HyPsd@SpanishPatch
651 \HyPsd@RussianPatch

```

```

652 \HyPsd@BabelPatch
653 \let\@safe@activetrue\relax
654 \let\@safe@activesfalse\relax

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

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

```

Package german.

```

657 \let\glqq\textglqq
658 \let\grqq\textgrqq
659 \let\glq\textglq
660 \let\grq\textgrq
661 \let\flqq\textflqq
662 \let\frqq\textfrqq
663 \let\flq\textflq
664 \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}

665 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

666 \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.

```

667 \let\hspace\HyPsd@hspace

```

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

```

668 \let\label\@gobble
669 \let\index\@gobble
670 \let\glossary\@gobble
671 \let\href\HyPsd@href
672 \let\@mkboth\@gobbletwo

  The \ref and \pageref is much more complicate because of their star form.
673 \let\ref\HyPsd@ref
674 \let\pageref\HyPsd@pageref
675 \let\nameref\HyPsd@nameref
676 \let\autoref\HyPsd@autoref

```


Miscellaneous commands.

```
677 \let\leavevmode\@empty
678 \let\mbox\@empty
```

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

```
679 \def\halign{\pdfstringdefWarn\halign\@gobble}%
680 \let\ignorespaces\HyPsd@ignorespaces
681 \let\Hy@SectionAnchorHref\@gobble
682 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
683 \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`).

```
684 \Hy@pdfstringtrue
685 \pdfstringdefPreHook
```

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

```
686 \HyPsd@LetUnexpandableSpace\space
687 \HyPsd@LetUnexpandableSpace\ %
688 \HyPsd@LetUnexpandableSpace~%
689 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
690 \ltx@ifundefined{@xspace}{%
691 \let\xspace\HyPsd@ITALCORR
692 }{%
693 \let\xspace\HyPsd@XSPACE
694 }%
695 \let\/\HyPsd@ITALCORR
696 \let\bgroup\/%
697 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
698 \let\discretionary\@gobbletwo
```

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

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

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

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

```
699 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
700 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
701 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
702 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package ‘xargs’:

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```
704 \begingroup
705 \let\GenericError\@gobblefour
706 \let\GenericWarning\@gobbletwo
707 \let\GenericInfo\@gobbletwo
```

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

```

708 \ifx\nofrenchguillemets\@undefined
709 \else
710 \nofrenchguillemets
711 \fi

```

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

```

712 \let\Hy@temp\xdef
713 \let\def\HyPsd@DefCommand
714 \let\gdef\HyPsd@DefCommand
715 \let\edef\HyPsd@DefCommand
716 \let\xdef\HyPsd@DefCommand
717 \let\futurelet\HyPsd@LetCommand
718 \let\let\HyPsd@LetCommand
719 \Hy@temp#1{#2}%
720 \endgroup

```

6.2.3 Postprocessing

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

```

721 \ifx#1\@empty
722 \else

```

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

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't found by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- `TEX` silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character `|` is appended to the string to make an outer brace to an inner one.

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

```

723 \HyPsd@ProtectSpaces#1%
724 \let\HyPsd@String\@empty
725 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
726 \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.

```

727 \let\HyPsd@SPACEOPTI\relax
728 {%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
731 \global\let#1\HyPsd@String
732 }%
733 \expandafter\HyPsd@RemoveMask\expandafter
734 |\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.

```

735 \expandafter
736 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
737 \let\HyPsd@String\@empty
738 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
739 \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.

```
740 \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.

```

741 \ifHy@unicode
742 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
743 \HyPsd@SPACEOPTI#1%
744 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
745 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
746 {\HyPsd@SPACEOPTI\80\273}#1%
747 \else
748 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
749 \expandafter\HyPsd@Subst\expandafter{%
750 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
751 \string\273}\HyPsd@SPACEOPTI\273}#1%
752 \fi

```

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

```

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

```

765 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
766 \ltx@ifundefined{@xspace}{%
767 }{%
768 \let\HyPsd@xspace\relax
769 \expandafter\HyPsd@Subst\expandafter
770 {\HyPsd@XSPACE}\HyPsd@xspace#1%
771 \let\HyPsd@xspace\HyPsd@doxspace
772 }%
773 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the

current version 3 of the AcrobatReader lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the AcrobatReader is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

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

```

774 \HyPsd@Subst{---}\textemdash#1%
775 \HyPsd@Subst{--}\textendash#1%
776 % \HyPsd@Subst{fi}\textfi#1%
777 % \HyPsd@Subst{fl}\textfl#1%
778 \HyPsd@Subst{!}\textexclamdown#1%
779 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```

780 \let\HyPsd@empty\@empty
```

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

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

```

781 \ifHy@unicode
782 \HyPsd@StringSubst\(\textparenleft#1%
783 \HyPsd@Subst(\textparenleft#1%
784 \else
785 \HyPsd@StringSubst\({\050}#1%
786 \HyPsd@Subst({\050}#1%
787 \HyPsd@StringSubst{\050}\string\{)#1%
788 \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.

```

789 \ifHy@unicode
790 \edef\HyPsd@SPACEOPTI{\80\040}%
791 \else
792 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
793 \fi
794 \xdef#1{#1\@empty}%
795 \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.

```

796 \endgroup
797 \begingroup
798 \ifHy@unicode
799 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```

800 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
801 \ltx@ifundefined{StringEncodingConvertTest}{%
802 }{%
803 \EdefUnescapeString\HyPsd@temp#1%
804 \ifxetex
805 \let\HyPsd@UnescapedString\HyPsd@temp
806 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
807 {utf16be}{ascii-print}{%
808 \EdefEscapeString\HyPsd@temp\HyPsd@temp
809 \global\let#1\HyPsd@temp
810 \HyPsd@EscapeTeX#1%
811 \Hy@unicodedefalse
812 }{%
813 \HyPsd@ToBigChars#1%
814 \HyPsd@EscapeTeX#1%
815 }%
816 \else
817 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
818 {utf16be}{pdfdoc}{%
819 \EdefEscapeString\HyPsd@temp\HyPsd@temp
820 \global\let#1\HyPsd@temp
821 \HyPsd@EscapeTeX#1%
822 \Hy@unicodedefalse
823 }{}%
824 \fi
825 }%
826 \fi
827 \fi
828 \HyPsd@XeTeXBigCharsfalse

```

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

```

829 \pdfstringdefPostHook#1%
830 \endgroup
831 }

```

`\Hy@pdfstringdef`

```

832 \def\Hy@pdfstringdef#1#2{%
833 \pdfstringdef\Hy@gtemp{#2}%
834 \let#1\Hy@gtemp
835 }

```

6.3 Encodings

6.3.1 XeTeX

```

836 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
837 \catcode\z@=12 %
838 \ifxetex
839 \expandafter\@firstofone
840 \else
841 \let\HyPsd@XeTeXBigCharstrue\@empty
842 \let\HyPsd@XeTeXBigCharsfalse\@empty
843 \expandafter\@gobble
844 \fi
845 {%

```

```

846 \newif\ifHyPsd@XeTeXBigChars
847 \def\HyPsd@XeTeXBigCharsfalse{%
848   \global\let\ifHyPsd@XeTeXBigChars\iffalse
849 }%
850 \def\HyPsd@XeTeXBigCharstrue{%
851   \global\let\ifHyPsd@XeTeXBigChars\iftrue
852 }%
853 \def\HyPsd@ToBigChars#1{%
854   \ifHyPsd@XeTeXBigChars
855     \edefEscapeHex\HyPsd@UnescapedString{%
856       \expandafter\@gobbletwo\HyPsd@UnescapedString
857     }%
858     \begingroup
859     \toks@{}%
860     \escapechar=92\relax
861     \let\x\HyPsd@ToBigChar
862     \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
863     \relax\relax\relax\relax\relax\relax\relax
864     \edef\x{%
865       \endgroup
866       \gdef\noexpand#1{\the\toks@}%
867     }%
868     \x
869   \fi
870 }%
871 \def\HyPsd@ToBigChar#1#2#3#4{%
872   \ifx\relax#1\relax
873     \let\x\relax
874   \else
875     \count@=#1#2#3#4\relax
876     \let\y\@empty
877     \lccode\z=\count@
878     \ifnum\count@=40 % (
879       \let\y\@backslashchar
880     \else
881       \ifnum\count@=41 % )
882         \let\y\@backslashchar
883       \else
884         \ifnum\count@=92 % backslash
885           \let\y\@backslashchar
886         \else
887           \ifnum\count@=10 % newline
888             \edef\y##1{\string\n}%
889           \else
890             \ifnum\count@=13 % carriage return
891               \edef\y##1{\string\r}%
892             \fi
893           \fi
894         \fi
895       \fi
896     \fi
897     \lowercase{%
898       \toks@\expandafter{%
899         \the\expandafter\toks@
900       }%
901       \y
902     }%

```



```

903 }%
904 \fi
905 \x
906 }%
907 }
908 \Hy@temp

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

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

```

```

955 \catcode37 14 % (percent)
956 \catcode40 12 % (
957 \catcode41 12 % )
958 \catcode42 12 % *
959 \catcode46 12 % .
960 \catcode58 12 % :
961 \catcode60 12 % <
962 \catcode61 12 % =
963 \catcode62 12 % >
964 \catcode91 12 % [
965 \catcode92 0 % \
966 \catcode93 12 % ]
967 \catcode123 1 % {
968 \catcode124 12 % |
969 \catcode125 2 % }
970 \makeatletter
971 }

```

`\Hy@RestoreCatcodeSettings`

```

972 \def\Hy@RestoreCatcodeSettings#1{%
973   \csname Hy@cat@#1\endcsname
974   \expandafter\let\csname Hy@cat@#1\endcsname\relax
975 }

```

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.

```

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

```

985 \def\HyPsd@LoadUnicode{%
986   \@ifundefined{T@PU}{%
987     \Hy@SaveCatcodeSettings{pu}%
988     \input{puenc.def}%
989     \Hy@RestoreCatcodeSettings{pu}%

```

```

990 \HyLinguex@Restore
991 }{}%
992 \DeclareFontFamily{PU}{pdf}{}%
993 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
994 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
995 \HyPsd@LoadExtra
996 \let\HyPsd@LoadUnicode\relax
997 }

```

`\HyPsd@LoadExtra`

```

998 \def\HyPsd@LoadExtra{%
999 \ifHy@psdextra
1000 \ltx@iffileloaded{puenc.def}{%
1001 \Hy@SaveCatcodeSettings{psdextra}%
1002 \input{psdextra.def}%
1003 \Hy@RestoreCatcodeSettings{psdextra}%
1004 \let\HyPsd@LoadExtra\relax
1005 }{}%
1006 \fi
1007 }

```

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 $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'s stomach, the second contains the replacement for PDF strings.

```

1008 \def\texorpdfstring{%
1009 \ifHy@pdfstring
1010 \expandafter\@secondoftwo
1011 \else
1012 \expandafter\@firstoftwo
1013 \fi
1014 }

```

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
1015 \@ifundefined{pdfstringdefPreHook}{%
1016 \let\pdfstringdefPreHook\@empty
1017 }{}
1018 \@ifundefined{pdfstringdefPostHook}{%
1019 \let\pdfstringdefPostHook\@gobble
1020 }{}

```

`\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`.

```

1021 \def\pdfstringdefDisableCommands{%
1022   \begingroup
1023   \makeatletter
1024   \HyPsd@DisableCommands
1025 }

```

`\HyPsd@DisableCommands`

```

1026 \long\def\HyPsd@DisableCommands#1{%
1027   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1028   \endgroup
1029 }

```

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

```

1030 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1031 \AtBeginDocument{%
1032   \ifundefined{pdfstringdefDisableCommands}{%
1033     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1034   }{}%
1035 }

```

`\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`.

```

1036 \def\pdfstringdefWarn#1{%
1037   \expandafter\noexpand\csname<>-string#1\endcsname
1038 }

```

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.

```

1039 \begingroup
1040   \catcode0=12 %
1041   \def\x{\endgroup
1042     \def\HyPsd@ignorespaces{%

```

```

1043 \romannumeral\expandafter`\expandafter^^@%
1044 \romannumeral^^@%
1045 }%
1046 }%
1047 \x

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
  \language\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`.

```

1048 \def\HyPsd@BabelPatch{%
1049 \let\HyOrg@languageshorthands\languageshorthands
1050 \let\languageshorthands\HyPsd@LanguageShorthands
1051 }
1052 \begingroup\expandafter\expandafter\expandafter\endgroup
1053 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1054 \let\HyPsd@langshort@system\@empty
1055 \def\HyPsd@LanguageShorthands#1{%
1056 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1057 \HyPsd@langshort@system
1058 \expandafter\@gobble
1059 \else
1060 \expandafter\@firstofone
1061 \fi
1062 {%
1063 \HyOrg@languageshorthands{#1}%
1064 }%
1065 }%
1066 \else
1067 \def\HyPsd@LanguageShorthands#1{%
1068 \ifnum\pdf@strcmp{#1}{system}=\z@
1069 \expandafter\@gobble
1070 \else
1071 \expandafter\@firstofone
1072 \fi
1073 {%
1074 \HyOrg@languageshorthands{#1}%
1075 }%
1076 }%
1077 \fi
1078 \def\Hy@temp{%
1079 \@ifpackageloaded{babel}{%
1080 \@ifpackagelater{babel}{2008/03/16}{%
1081 \let\Hy@temp\@empty
1082 }{%
1083 \def\HyPsd@BabelPatch{%
1084 \let\HyOrg@languageshorthands\languageshorthands
1085 }%
1086 }%
1087 }{%

```

```

1088 }
1089 \Hy@temp
1090 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1091 \newif\ifHy@next

    Nothing to do for english.
1092 \ltx@ifundefined{danish@sh@}{@sel}{-}{-}%
1093 \def\HyPsd@babel@danish{%
1094   \declare@shorthand{danish}{-}{-}%
1095   \declare@shorthand{danish}{-}{-}%
1096 }%
1097 }
1098 \ltx@ifundefined{dutch@sh@}{@sel}{-}{-}%
1099 \def\HyPsd@babel@dutch{%
1100   \declare@shorthand{dutch}{-}{-}%
1101   \declare@shorthand{dutch}{-}{-}%
1102 }%
1103 }
1104 \ltx@ifundefined{finnish@sh@}{@sel}{-}{-}%
1105 \def\HyPsd@babel@finnish{%
1106   \declare@shorthand{finnish}{-}{-}%
1107 }%
1108 }
1109 \ltx@ifundefined{french@sh@}{@sel}{-}{-}%
1110 \def\HyPsd@babel@frenchb{%
1111   \def\guill@spacing{ }%
1112 }%
1113 }
1114 \ltx@ifundefined{german@sh@}{@sel}{-}{-}%
1115 \def\HyPsd@babel@german{%
1116   \declare@shorthand{german}{f}{f}%
1117   \declare@shorthand{german}{-}{-}%
1118   \declare@shorthand{german}{-}{-}%
1119 }%
1120 }
1121 \ltx@ifundefined{macedonian@sh@}{@sel}{-}{-}%
1122 \def\HyPsd@babel@macedonian{%
1123   \declare@shorthand{macedonian}{-}{-}%
1124   \declare@shorthand{macedonian}{-}{-}%
1125 }%
1126 }{}
1127 \ltx@ifundefined{ngerman@sh@}{@sel}{-}{-}%
1128 \def\HyPsd@babel@ngerman{%
1129   \declare@shorthand{ngerman}{-}{-}%
1130   \declare@shorthand{ngerman}{-}{-}%
1131 }%
1132 }
1133 \ltx@ifundefined{portuges@sh@}{@sel}{-}{-}%
1134 \def\HyPsd@babel@portuges{%
1135   \declare@shorthand{portuges}{-}{-}%
1136 }%
1137 }
1138 \ltx@ifundefined{russian@sh@}{@sel}{-}{-}%
1139 \def\HyPsd@babel@russian{%
1140   \declare@shorthand{russian}{-}{-}%
1141   \declare@shorthand{russian}{-}{-}%
1142 }%

```

```

1143 }
1144 \ltx@ifundefined{slovene@sh@}{@sel}{-}{%
1145   \def\HyPsd@babel@slovene{%
1146     \declare@shorthand{slovene}{-}{-}%
1147   }%
1148 }

```

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

```

1149 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
1150   \def\HyPsd@babel@spanish{%
1151     \declare@shorthand{spanish}{<<}{\guillemotleft}%
1152     \declare@shorthand{spanish}{>>}{\guillemotright}%
1153     \declare@shorthand{spanish}{=}{}-%
1154     \declare@shorthand{spanish}{~}{}-%
1155     \declare@shorthand{spanish}{!}{\textexclamdown}%
1156     \declare@shorthand{spanish}{?}{\textquestiondown}%
1157   }%
1158 }
1159 \ltx@ifundefined{swedish@sh@}{@sel}{-}{%
1160   \def\HyPsd@babel@swedish{%
1161     \declare@shorthand{swedish}{-}{-}%
1162     \declare@shorthand{swedish}{~}{}-%
1163   }%
1164 }
1165 \ltx@ifundefined{ukrainian@sh@}{@sel}{-}{%
1166   \def\HyPsd@babel@ukrainian{%
1167     \declare@shorthand{ukrainian}{-}{-}%
1168     \declare@shorthand{ukrainian}{~}{}-%
1169   }%
1170 }
1171 \ltx@ifundefined{usorbian@sh@}{@sel}{-}{%
1172   \def\HyPsd@babel@usorbian{%
1173     \declare@shorthand{usorbian}{f}{f}%
1174     \declare@shorthand{usorbian}{-}{-}%
1175   }%
1176 }
1177 \ltx@ifundefined{greek@sh@\string-@sel}{-}{%
1178   \let\HyPsd@GreekPatch\@empty
1179 }{%
1180   \def\HyPsd@GreekPatch{%
1181     \let\greeknumeral\HyPsd@greeknumeral
1182     \let\Greeknnumeral\HyPsd@Greeknnumeral
1183   }%
1184 }
1185 \def\HyPsd@greeknumeral#1{%
1186   \HyPsd@GreekNum\@firstoftwo{#1}%
1187 }
1188 \def\HyPsd@Greeknnumeral#1{%
1189   \HyPsd@GreekNum\@secondoftwo{#1}%
1190 }
1191 \def\HyPsd@GreekNum#1#2{%
1192   \ifHy@unicode
1193     \ifnum#2<\@ne
1194       \@arabic{#2}%
1195     \else
1196       \ifnum#2<1000000 %
1197         \HyPsd@@GreekNum#1{#2}%
1198       \else

```

```

1199     \@arabic{#2}%
1200     \fi
1201   \fi
1202 \else
1203   \@arabic{#2}%
1204   \fi
1205 }
1206 \def\HyPsd@@GreekNum#1#2{%
1207   \ifnum#2<\@m
1208     \ifnum#2<10 %
1209       \expandafter\HyPsd@GreekNumI
1210       \expandafter\@gobble\expandafter#1\number#2%
1211     \else
1212       \ifnum#2<100 %
1213         \expandafter\HyPsd@GreekNumII
1214         \expandafter\@gobble\expandafter#1\number#2%
1215       \else
1216         \expandafter\HyPsd@GreekNumIII
1217         \expandafter\@gobble\expandafter#1\number#2%
1218       \fi
1219     \fi
1220     \ifnum#2>\z@
1221       \textnumeralsigngreek
1222     \fi
1223 \else
1224   \ifnum#2<\@M
1225     \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1226   \else
1227     \ifnum#2<100000 %
1228       \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1229     \else
1230       \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1231     \fi
1232   \fi
1233 \fi
1234 }
1235 \def\HyPsd@GreekNumI#1#2#3{%
1236   #1{%
1237     \ifnum#3>\z@
1238       \textnumeralsignlowergreek
1239     \fi
1240   }%
1241   \expandafter#2%
1242   \ifcase#3 %
1243     {}{}%
1244     \or\textalpha\textAlpha
1245     \or\textbeta\textBeta
1246     \or\textgamma\textGamma
1247     \or\textdelta\textDelta
1248     \or\textepsilon\textEpsilon
1249     \or\textstigmagreek\textStigmagreek
1250     \or\textzeta\textZeta
1251     \or\texteta\textEta
1252     \or\texttheta\textTheta
1253   \else
1254     {}{}%
1255   \fi

```



```

1256 }
1257 \def\HyPsd@GreekNumII#1#2#3#4{%
1258   #1{%
1259     \ifnum#3>\z@
1260       \textnumeralsignlowergreek
1261     \fi
1262   }%
1263   \expandafter#2%
1264   \ifcase#3 %
1265     {}{}%
1266     \or\textiota\textIota
1267     \or\textkappa\textKappa
1268     \or\textlambda\textLambda
1269     \or\textmu\textMu
1270     \or\textnu\textNu
1271     \or\textxi\textXi
1272     \or\textomicron\textOmicron
1273     \or\textpi\textPi
1274     \or\textkoppagreek\textKoppagreek
1275     \else
1276       {}{}%
1277     \fi
1278   \HyPsd@GreekNumI#1#2#4%
1279 }
1280 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1281   #1{%
1282     \ifnum#3>\z@
1283       \textnumeralsignlowergreek
1284     \fi
1285   }%
1286   \expandafter#2%
1287   \ifcase#3 %
1288     {}{}%
1289     \or\textrho\textRho
1290     \or\textsigma\textSigma
1291     \or\texttau\textTau
1292     \or\textupsilon\textUpsilon
1293     \or\textphi\textPhi
1294     \or\textchi\textChi
1295     \or\textpsi\textPsi
1296     \or\textomega\textOmega
1297     \or\textsampigreek\textSampigreek
1298     \else
1299       {}{}%
1300     \fi
1301   \HyPsd@GreekNumII#1#2#4#5%
1302 }
1303 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1304   \HyPsd@GreekNumI\@firstofone#1#2%
1305   \HyPsd@@@GreekNum#1{#3#4#5}%
1306 }
1307 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1308   \HyPsd@GreekNumII\@firstofone#1#2#3%
1309   \HyPsd@@@GreekNum#1{#4#5#6}%
1310 }
1311 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1312   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%

```

```

1313 \HyPsd@@GreekNum#1{#5#6#7}%
1314 }

1315 \def\HyPsd@SpanishPatch{%
1316 \ltx@ifundefined{es@save@dot}{%
1317 }{%
1318 \let\.\es@save@dot
1319 }%
1320 }

```

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

```

1321 \def\HyPsd@RussianPatch{%
1322 \ltx@ifundefined{russian@sh@"@-@}{%
1323 }{%
1324 \@namedef{russian@sh@"@-@}{-}%
1325 }%
1326 }

```

6.5.3 CJK patch

```

1327 \RequirePackage{intcalc}[2007/09/27]

\HyPsd@CJKhook

1328 \def\HyPsd@CJKhook{%
1329 \ltx@ifpackageloaded{CJK}{%
1330 \let\CJK@kern\relax
1331 \let\CJKkern\relax
1332 \let\CJK@CJK\relax
1333 \ifHy@CJKbookmarks
1334 \HyPsd@CJKhook@bookmarks
1335 \fi
1336 \HyPsd@CJKhook@unicode
1337 }{%
1338 }

```

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 (≥ 0x40).

```

1339 \begingroup
1340 \catcode"7F=\active
1341 \toks@{%
1342 \let\CJK@ignorespaces\empty
1343 \def\CJK@char#1{\@gobbletwo}%
1344 \let\CJK@charx\@gobblefour
1345 \let\CJK@punctchar\@gobblefour
1346 \def\CJK@punctcharx#1{\@gobblefour}%
1347 \catcode"7F=\active
1348 \def^^7f#1^^7f#2^^7f{%

```

```

1349 \string #1\HyPsd@DecimalToOctal{#2}%
1350 }%
1351 % ... ?
1352 \ifHy@unicode
1353 \def\Hy@cjkpu{\80}%
1354 \else
1355 \let\Hy@cjkpu\@empty
1356 \fi
1357 \HyPsd@CJKActiveChars
1358 }%
1359 \count@=127 %
1360 \@whilenum\count@<255 \do{%
1361 \advance\count@ by 1 %
1362 \lccode\~=\count@
1363 \lowercase{%
1364 \toks@\expandafter{\the\toks@ ~}%
1365 }%
1366 }%
1367 \toks@\expandafter{\the\toks@ !}%
1368 \xdef\HyPsd@CJKhook@bookmarks{%
1369 \the\toks@
1370 }%
1371 \endgroup

```

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

```

1372 \def\HyPsd@CJKActiveChars#1{%
1373 \ifx#1!%
1374 \let\HyPsd@CJKActiveChars\relax
1375 \else
1376 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1377 \fi
1378 \HyPsd@CJKActiveChars
1379 }

```

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

```

1380 \def\HyPsd@DecimalToOctal#1{%
1381 \ifcase #1 %
1382 \or \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1383 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1384 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1385 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1386 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1387 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1388 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1389 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1390 \or @\or A\or B\or C\or D\or E\or F\or G%
1391 \or H\or I\or J\or K\or L\or M\or N\or O%
1392 \or P\or Q\or R\or S\or T\or U\or V\or W%
1393 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1394 \or \140\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 \173\or \174\or \175\or \176\or \177%
1398 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1399 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1400 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%

```

```

1401 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1402 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1403 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1404 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1405 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1406 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1407 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1408 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1409 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1410 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1411 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1412 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1413 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1414 \fi
1415 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1416 \def\HyPsd@CJKhook@unicode{%
1417 \let\Unicode\HyPsd@CJK@Unicode
1418 \let\CJKnumber\HyPsd@CJKnumber
1419 \let\CJKdigits\HyPsd@CJKdigits
1420 }

```

\HyPsd@CJK@Unicode

```

1421 \def\HyPsd@CJK@Unicode#1#2{%
1422 \ifnum#1<256 %
1423 \HyPsd@DecimalToOctalFirst{#1}%
1424 \HyPsd@DecimalToOctalSecond{#2}%
1425 \else
1426 \933%
1427 \expandafter\expandafter\expandafter\HyPsd@HighA
1428 \intcalcDiv{#1}{4}!%
1429 \933%
1430 \ifcase\intcalcMod{#1}{4} %
1431 4\or 5\or 6\or 7%
1432 \fi
1433 \HyPsd@DecimalToOctalSecond{#2}%
1434 \fi
1435 }

1436 \def\HyPsd@HighA#1!{%
1437 \expandafter\expandafter\expandafter\HyPsd@HighB
1438 \IntCalcDiv#1!64!!%
1439 \expandafter\expandafter\expandafter\HyPsd@HighD
1440 \IntCalcMod#1!64!!%
1441 }

1442 \def\HyPsd@HighB#1!{%
1443 \expandafter\expandafter\expandafter\HyPsd@HighC
1444 \IntCalcDec#1!!%
1445 }

1446 \def\HyPsd@HighC#1!{%
1447 \IntCalcDiv#1!4!%
1448 \@backslashchar
1449 \IntCalcMod#1!4!%
1450 }

```

```

1451 \def\HyPsd@HighD#1!{%
1452   \ifcase\IntCalcDiv#1!8! %
1453     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1454   \fi
1455   \ifcase\IntCalcMod#1!8! %
1456     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1457   \fi
1458 }
1459 \def\HyPsd@DecimalToOctalFirst#1{%
1460   \9%
1461   \ifcase#1 %
1462     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1463     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1464     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1465     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1466     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1467     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1468     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1469     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1470     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1471     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1472     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1473     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1474     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1475     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1476     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1477     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1478     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1479     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1480     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1481     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1482     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1483     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1484     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1485     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1486     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1487     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1488     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1489     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1490     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1491     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1492     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1493     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1494   \fi
1495 }
1496 \def\HyPsd@DecimalToOctalSecond#1{%
1497   \ifcase #1 %
1498     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1499     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1500     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1501     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1502     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1503     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1504     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1505     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1506     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1507     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%

```

```

1508 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1509 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1510 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1511 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1512 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1513 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1514 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1515 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1516 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1517 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1518 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1519 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1520 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1521 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1522 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1523 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1524 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1525 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1526 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1527 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1528 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1529 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1530 \fi
1531 }

1532 \def\HyPsd@CJKnumber#1{%
1533 \ifnum#1<\z@
1534 \CJK@minus
1535 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1536 \else
1537 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1538 \fi
1539 }

1540 \def\HyPsd@@CJKnumber#1{%
1541 \ifcase#1 %
1542 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1543 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1544 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1545 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1546 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1547 \CJK@ten\CJK@nine
1548 \else
1549 \ifnum#1<10000 %
1550 \HyPsd@CJKnumberFour#1!\@empty{20}%
1551 \@empty
1552 \else
1553 \ifnum#1<100000000 %
1554 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1555 \IntCalcDiv#1!10000!%
1556 !\{20}%
1557 \CJK@tenthousand
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcMod#1!10000!%
1560 !\CJK@zero{10}%
1561 \@empty
1562 \else
1563 \expandafter\HyPsd@CJKnumberLarge
1564 \number\IntCalcDiv#1!100000000!\expandafter!%

```

```

1565     \number\IntCalcMod#1!100000000!!%
1566     \fi
1567   \fi
1568 \fi
1569 }
1570 \def\HyPsd@CJKnumberLarge#1!#2!{%
1571   \HyPsd@CJKnumberFour#1!{}{20}%
1572   \CJK@hundredmillion
1573   \ifnum#2=\z@
1574   \else
1575     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1576       \IntCalcDiv#2!10000!%
1577     !\CJK@zero{10}%
1578     \CJK@tenthousand
1579     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580       \IntCalcMod#2!10000!%
1581     !\CJK@zero{10}%
1582     \@empty
1583   \fi
1584 }
1585 \def\HyPsd@CJKnumberFour#1!#2#3{%
1586   \ifnum#1=\z@
1587     \expandafter\@gobble
1588   \else
1589     \ifnum#1<1000 %
1590       #2%
1591       \HyPsd@CJKnumberThree#1!{}{#3}%
1592     \else
1593       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1594       \CJK@thousand
1595       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1596         \IntCalcMod#1!1000!%
1597       !\CJK@zero{10}%
1598     \fi
1599   \fi
1600 }
1601 \def\HyPsd@CJKnumberThree#1!#2#3{%
1602   \ifnum#1=\z@
1603   \else
1604     \ifnum#1<100 %
1605       #2%
1606       \HyPsd@CJKnumberTwo#1!{}{#3}%
1607     \else
1608       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1609       \CJK@hundred
1610       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1611         \IntCalcMod#1!100!%
1612       !\CJK@zero{10}%
1613     \fi
1614   \fi
1615 }
1616 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1617   \ifnum#1=\z@
1618   \else
1619     \ifnum#1<#3 %
1620       #2%
1621       \HyPsd@@@CJKnumber{#1}%

```

```

1622 \else
1623 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1624 \CJK@ten
1625 \ifnum\IntCalcMod#1!10!=\z@
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1628 \fi
1629 \fi
1630 \fi
1631 }

1632 \def\HyPsd@CJKdigits#1{%
1633 \ifx*#1\relax
1634 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1635 \else
1636 \HyPsd@@CJKdigits\CJK@null{#1}%
1637 \fi
1638 }

1639 \def\HyPsd@@CJKdigits#1#2{%
1640 \ifx\#2\%
1641 \else
1642 \HyPsd@@@CJKdigits#1#2\@nil
1643 \fi
1644 }%
1645 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1646 \HyPsd@CJKdigit#1{#2}%
1647 \ifx\#3\%
1648 \expandafter\@gobble
1649 \else
1650 \expandafter\@firstofone
1651 \fi
1652 {%
1653 \HyPsd@@@CJKdigits#1#3\@nil
1654 }%
1655 }

1656 \def\HyPsd@CJKdigit#1#2{%
1657 \ifcase#2 %
1658 #1\or
1659 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1660 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1661 \fi
1662 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

\def\@current@cmd#1{%
\lll\ifx\protect\@typeset@protect
\lllll\@inmathwarn#1%

```



```

\else
\expandafter\@gobble
\fi}
\def\@changed@cmd#1#2{%
\ifx\protect\@typeset@protect
\inmathwarn#1%
\expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
\expandafter\ifx\csname_\string#1\endcsname\relax
\expandafter\def\csname_\string#1\endcsname{%
\TextSymbolUnavailable#1%
}%
\fi
\global\expandafter\let
\csname\cf@encoding_\string#1\expandafter\endcsname
\csname_\string#1\endcsname
\fi
\csname\cf@encoding\string#1%
\expandafter\endcsname
\else
\expandafter\@gobble
\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}

1663 \def\HyPsd@inmathwarn#1#2{%
1664   \ifx#2\expandafter
1665     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1666       \HyPsd@GLYPHERR
1667       \expandafter\@gobble\string#1%
1668       >%
1669       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1670     \else
1671       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1672     \fi
1673   \else
1674     \expandafter#2%
1675   \fi
1676 }
1677 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1678 \def\HyPsd@EndWithElse#1\else\else}

```

\HyPsd@add@accent

```

1679 \def\HyPsd@add@accent#1#2{%
1680   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1681   #2%
1682 }%

```

6.5.7 Unexpandable spaces

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

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

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

```
1683 \def\HyPsd@LetUnexpandableSpace#1{%
1684   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1685 }
```

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

```
1686 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1687 \edef\HyPsd@XSPACE{\string#\string X}
1688 \edef\HyPsd@ITALCORR{\string#\string I}
1689 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1690 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1691 \def\HyPsd@@hspace#1*##2\END{%
1692   \ifx\##2\%
1693     \HyPsd@hspacetest{#1}%
1694   \else
1695     \expandafter\HyPsd@hspacetest
1696   \fi
1697 }
```

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

```
1698 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1699 \ltx@ifundefined{tocsection}{%
1700   \let\HyPsd@AMSclassfix\relax
1701 }{%
1702   \def\HyPsd@AMSclassfix{%
1703     \let\tocpart\HyPsd@tocsection
1704     \let\tocchapter\HyPsd@tocsection
1705     \let\tocappendix\HyPsd@tocsection
1706     \let\tocsection\HyPsd@tocsection
1707     \let\tocsubsection\HyPsd@tocsection
1708     \let\tocsubsubsection\HyPsd@tocsection
1709     \let\tocparagraph\HyPsd@tocsection
1710   }%
```

```

1711 \def\HyPsd@tocsection#1#2#3{%
1712   \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1713   #3%
1714 }%
1715 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1716 \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.

```

1717 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

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

```

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

```

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

```

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

```

1733 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1734 \def\HyPsd@@pageref#1*#2\END{%
1735   \ifx\#2\%
1736     \HyPsd@@@pageref{#1}%
1737   \else
1738     \expandafter\HyPsd@@@pageref
1739   \fi
1740 }

```

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

```

1741 \def\HyPsd@@@pageref#1{%
1742   \expandafter\ifx\csname r@#1\endcsname\relax
1743     ??%
1744   \else
1745     \expandafter\expandafter\expandafter\expandafter
1746     \expandafter\expandafter\expandafter\@car
1747     \expandafter\expandafter\expandafter\@gobble
1748     \csname r@#1\endcsname{}\@nil
1749   \fi
1750 }

```

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

```

1751 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*END}

```

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

```

1752 \def\HyPsd@@nameref#1*#2END{%
1753   \ifx\#2\%
1754     \HyPsd@@@nameref{#1}%
1755   \else
1756     \expandafter\HyPsd@@@nameref
1757   \fi
1758 }

```

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

```

1759 \def\HyPsd@@@nameref#1{%
1760   \expandafter\ifx\csname r@#1\endcsname\relax
1761     ??%
1762   \else
1763     \expandafter\expandafter\expandafter\expandafter
1764     \expandafter\expandafter\expandafter\@car
1765     \expandafter\expandafter\expandafter\@gobbletwo
1766     \csname r@#1\endcsname{}\}\@nil
1767   \fi
1768 }

```

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

```

1769 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*END}

```

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

```

1770 \def\HyPsd@@autoref#1*#2END{%
1771   \ifx\#2\%
1772     \HyPsd@@@autoref{#1}%
1773   \else
1774     \expandafter\HyPsd@@@autoref
1775   \fi
1776 }

```

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

```

1777 \def\HyPsd@@@autoref#1{%
1778   \expandafter\ifx\csname r@#1\endcsname\relax
1779     ??%
1780   \else
1781     \expandafter\expandafter\expandafter\HyPsd@autorefname
1782     \csname r@#1\endcsname{}\}\}\@nil
1783   \expandafter\expandafter\expandafter
1784   \@car\csname r@#1\endcsname\@nil
1785   \fi
1786 }

```

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

```

1787 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1788   \ifx\#4\%
1789   \else
1790     \HyPsd@@@autorefname#4.\@nil
1791   \fi
1792 }

```

`\HyPsd@@autorefname`

```

1793 \def\HyPsd@@autorefname#1.#2\@nil{%
1794   \ltx@ifundefined{#1autorefname}{}%
1795   \ltx@ifundefined{#1name}{}%
1796   }{%
1797     \csname#1name\endcsname\space
1798   }%
1799 }{%
1800   \csname#1autorefname\endcsname\space
1801 }%
1802 }

```

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 cause TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

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

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

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

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

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

`\HyPsd@DefCommand`

`\HyPsd@LetCommand`

```

1803 \begingroup
1804   \def\x#1#2{%
1805     \endgroup
1806     \let#1\def
1807     \def\HyPsd@DefCommand##1##2###{%
1808       #1%
1809       \expandafter\noexpand
1810       \csname\expandafter\@gobble\string##1\@empty\endcsname
1811       \@gobble
1812     }%
1813     \let#2\let
1814     \def\HyPsd@@LetCommand##1{%
1815       \expandafter\ifx\csname##1\expandafter\endcsname

```

```

1816             \csname iftrue\endcsname
1817     \pdfstringdefWarn\let
1818     \expandafter\@gobble
1819   \else
1820     \expandafter\ifx\csname##1\expandafter\endcsname
1821       \csname iffalse\endcsname
1822     \pdfstringdefWarn\let
1823     \expandafter\expandafter\expandafter\@gobble
1824   \else
1825     #2%
1826     \expandafter\noexpand
1827     \csname##1\expandafter\expandafter\expandafter\endcsname
1828   \fi
1829 \fi
1830 }%
1831 }%
1832 \expandafter\x\csname <def>-command\expandafter\endcsname
1833     \csname <let>-command\endcsname
1834 \def\HyPsd@LetCommand#1{%
1835   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1836   \expandafter\expandafter\expandafter{%
1837     \expandafter\@gobble\string#1\@empty
1838   }%
1839 }

```

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).

```

1840 \def\HyPsd@ifnextchar#1{%
1841   \pdfstringdefWarn#1%
1842   \expandafter\@gobbletwo\@gobble
1843 }

```

6.5.14 \@protected@testoptifnextchar

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

```

1844 \def\HyPsd@protected@testopt#1{%
1845   \pdfstringdefWarn#1%
1846   \@gobbletwo
1847 }

```

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:

```
1848 \def\HyPsd@Warning#1{%
1849   \begingroup
1850   \let\space\ltx@space
1851   \Hy@Warning{#1}%
1852   \endgroup
1853 }
```

6.6.2 Protecting spaces

```
1854 \RequirePackage{etexcmds}[2007/09/09]
1855 \ifetex@unexpanded
1856   \expandafter\@secondoftwo
1857 \else
1858   \expandafter\@firstoftwo
1859 \fi
1860 {%
```

`\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`.

```
1861 \def\HyPsd@ProtectSpaces#1{%
1862   \iftrue
1863     \expandafter\HyPsd@@ProtectSpacesFi
1864     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1865   \fi
1866 }%
```

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

```
1867 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1868   \fi
1869   \ifx\scrollmode#2\scrollmode
1870     \HyPsd@RemoveMask#1\HyPsd@End#3%
1871   \else
1872     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1873     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1874   \fi
1875 }%
```

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.

```
1876 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1877   \toks@\expandafter{#1}%
1878   \xdef#2{\the\toks@}%
1879 }%
```

```

1880 }{%
1881   \let\HyPsd@fi\fi
1882   \def\HyPsd@ProtectSpaces#1{%
1883     \xdef#1{%
1884       \iftrue
1885         \expandafter\HyPsd@@ProtectSpacesFi
1886         \expandafter|\expandafter\@empty#1| %
1887       \HyPsd@fi
1888     }%
1889     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1890   }%
1891   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1892     \fi
1893     \etex@unexpanded{#1}%
1894     \ifx\scrollmode#2\scrollmode
1895     \else
1896       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1897     \HyPsd@fi
1898   }%
1899   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1900     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1901   }%
1902 }

```

6.6.3 Remove grouping braces

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

```

1903 \def\HyPsd@RemoveBraces#1{%
1904   \ifx\scrollmode#1\scrollmode
1905   \else
1906     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1907   \fi
1908 }

```

`\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`.

```

1909 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1910   \fi
1911   \def\Hy@temp@A{#1#2}%
1912   \def\Hy@temp@B{#3}%
1913   \ifx\Hy@temp@A\Hy@temp@B
1914     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1915       \HyPsd@String#1%
1916     }%
1917     \ifx\scrollmode#2\scrollmode
1918     \else
1919       \Hy@ReturnAfterFiFiEnd{%

```



```

1920     \HyPsd@RemoveBraces{#2}%
1921   }%
1922   \fi
1923 \else
1924   \def\Hy@temp@A{#1}%
1925   \HyPsd@AppendItalcorr\HyPsd@String
1926   \ifx\Hy@temp@A\@empty
1927     \Hy@ReturnAfterElseFiFiEnd{%
1928       \HyPsd@RemoveBraces{#2}%
1929     }%
1930 \else
1931   \HyPsd@ProtectSpaces\Hy@temp@A
1932   \HyPsd@AppendItalcorr\Hy@temp@A
1933   \Hy@ReturnAfterFiFiEnd{%
1934     \expandafter\HyPsd@RemoveBraces\expandafter
1935       {\Hy@temp@A#2}%
1936   }%
1937   \fi
1938 \fi
1939 \Hy@ReturnEnd
1940 }

```

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

```

1941 \def\HyPsd@AppendItalcorr#1{%
1942   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1943 }
1944 \def\HyPsd@@AppendItalcorr#1#2{%
1945   \expandafter\def\expandafter#2\expandafter{#2#1}%
1946 }

```

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>.

```

1947 \ltx@ifundefined{directlua}{%
1948 }{%
1949   \expandafter\ifx\csname\endcsname\relax\fi
1950 }

```

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`.

```

1951 \begingroup
1952 \catcode`\Q=\active
1953 \let Q\ltx@empty
1954 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1955 \global\let\HyPsd@Rest\relax
1956 \ifcat\relax\noexpand#1\relax
1957 \ifx#1\protect
1958 \else
1959 \ifx#1\penalty
1960 \setbox\z@=\hbox{%
1961 \afterassignment\HyPsd@AfterCountRemove
1962 \count@=#2\HyPsd@end
1963 }%
1964 \else
1965 \ifx#1\kern
1966 \setbox\z@=\hbox{%
1967 \afterassignment\HyPsd@AfterDimenRemove
1968 \dimen@=#2\HyPsd@end
1969 }%
1970 \else
1971 \ifx#1\hskip
1972 \setbox\z@=\hbox{%
1973 \afterassignment\HyPsd@AfterSkipRemove
1974 \skip@=#2\HyPsd@end
1975 }%
1976 \else
1977 \HyPsd@CatcodeWarning{#1}%
1978 \fi
1979 \fi
1980 \fi
1981 \fi
1982 \else
1983 \ifcat\noexpand#1\noexpandQ% active character
1984 \expandafter\expandafter\expandafter\def
1985 \expandafter\expandafter\expandafter\HyPsd@String
1986 \expandafter\expandafter\expandafter{%
1987 \expandafter\HyPsd@String\string#1%
1988 }%
1989 \else
1990 \ifcat#1A% letter
1991 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1992 \HyPsd@String#1%
1993 }%
1994 \else
1995 \ifcat#1 % SPACE
1996 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997 \HyPsd@String\HyPsd@SPACEOPTI
1998 }%
1999 \else
2000 \ifcat$#1%
2001 \HyPsd@CatcodeWarning{math shift}%
2002 \else
2003 \ifcat&#1%
2004 \HyPsd@CatcodeWarning{alignment tab}%
2005 \else
2006 \ifcat^#1%
2007 \HyPsd@CatcodeWarning{superscript}%

```

```

2008         \else
2009         \ifcat_#1%
2010         \HyPsd@CatcodeWarning{subscript}%
2011         \else
2012         \expandafter\def\expandafter\HyPsd@String\expandafter{%
2013         \HyPsd@String#1%
2014         }%
2015         \fi
2016     \fi
2017 \fi
2018 \fi
2019 \fi
2020 \fi
2021 \fi
2022 \fi
2023 \ifx\HyPsd@Rest\relax
2024 \ifx\scrollmode#2\scrollmode
2025 \else
2026 \Hy@ReturnAfterFiFiEnd{%
2027 \HyPsd@CheckCatcodes#2\HyPsd@End
2028 }%
2029 \fi
2030 \else
2031 \ifx\HyPsd@Rest\@empty
2032 \else
2033 \Hy@ReturnAfterFiFiEnd{%
2034 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2035 }%
2036 \fi
2037 \fi
2038 \Hy@ReturnEnd
2039 }%
2040 \endgroup

```

Remove counts, dimens, skips.

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

```

2041 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2042 \gdef\HyPsd@Rest{#1}%
2043 }

```

`\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.

```

2044 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2045 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2046 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2047 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2048 \else
2049 \ifdim\dimen@=\z@
2050 \else
2051 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2052 \fi
2053 \gdef\HyPsd@Rest{#1}%
2054 \fi
2055 }

```

`\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).

```

2056 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2057   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>lex %
2058     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2059     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2060   \else
2061     \ifdim\skip@=\z@
2062     \else
2063       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2064     \fi
2065     \gdef\HyPsd@Rest{#1}%
2066   \fi
2067 }
```

Catcode warnings.

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

```

2068 \def\HyPsd@CatcodeWarning#1{%
2069   \HyPsd@Warning{%
2070     Token not allowed in a PDF string (%)
2071     \ifHy@unicode
2072       Unicode%
2073     \else
2074       PDFDocEncoding%
2075     \fi
2076   }:%
2077   \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'~%
2078 }%
2079 }
2080 \begingroup
2081 \catcode`~|=0 %
2082 \catcode`~|=12 %
2083 |gdef|HyPsd@RemoveCmdPrefix#1{%
2084   |expandafter|HyPsd@@RemoveCmdPrefix
2085     |string#1|@empty\<>-|@empty|@empty
2086 }%
2087 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
2088 |endgroup
```

`\HyPsd@RemoveSpaceWarning`

```

2089 \def\HyPsd@RemoveSpaceWarning#1{%
2090   \HyPsd@Warning{%
2091     Token not allowed in a PDF string (%)
2092     \ifHy@unicode
2093       Unicode%
2094     \else
2095       PDFDocEncoding%
2096     \fi
2097   }:%
2098   \MessageBreak #1~\MessageBreak
2099   removed%
2100 }%
2101 }
```

`\HyPsd@ReplaceSpaceWarning`

```

2102 \def\HyPsd@ReplaceSpaceWarning#1{%
2103   \HyPsd@Warning{%
2104     Token not allowed in a PDF string (%
2105     \ifHy@unicode
2106       Unicode%
2107     \else
2108       PDFDocEncoding%
2109     \fi
2110   ):%
2111   \MessageBreak #1\MessageBreak
2112   replaced by space%
2113 }%
2114 }

```

6.6.5 Check for wrong glyphs

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

```

2115 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2116   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2117     \HyPsd@String#1%
2118   }%
2119   \ifx\#2\%
2120   \else
2121     \ltx@ReturnAfterFi{%
2122       \HyPsd@GlyphProcessWarning#2\@empty
2123     }%
2124   \fi
2125 }
2126 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2127   \HyPsd@@@GlyphProcessWarning#1++>%
2128   \HyPsd@GlyphProcess#2\@empty
2129 }
2130 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2131   \ifx\#2\%
2132     \HyPsd@Warning{%
2133       Glyph not defined in %
2134       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2135       removing \@backslashchar#1'%
2136     }%
2137   \else
2138     \HyPsd@Warning{%
2139       Composite letter \@backslashchar#1+#2'\MessageBreak
2140       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2141       \MessageBreak
2142       removing \@backslashchar#1'%
2143     }%
2144   \fi
2145 }

```

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`.

```

2146 \def\HyPsd@spaceopti#1{ % first space
2147 \ifx\HyPsd@spaceopti#1%
2148 \040%
2149 \else
2150 #1%
2151 \fi
2152 }%

```

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.

```

2153 \def\HyPsd@Subst#1#2#3{%
2154 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2155 \fi
2156 ##1%
2157 \ifx\scrollmode##2\scrollmode
2158 \else
2159 #2%
2160 \HyPsd@@ReplaceFi##2\END
2161 \fi
2162 }%
2163 \xdef#3{%
2164 \iftrue
2165 \expandafter\HyPsd@@ReplaceFi#3#1\END
2166 \fi
2167 }%
2168 }

```

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

```

2169 \def\HyPsd@StringSubst#1{%
2170 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2171 }

```

`\HyPsd@EscapeTeX`

```

2172 \begingroup
2173 \lccode`\!=`\%%
2174 \lccode`\|=`\%%
2175 \lccode`\(=\{
2176 \lccode`\)=`\}%
2177 \lccode`0=\ltx@zero
2178 \lccode`1=\ltx@zero
2179 \lccode`3=\ltx@zero
2180 \lccode`4=\ltx@zero
2181 \lccode`5=\ltx@zero
2182 \lccode`7=\ltx@zero
2183 \lowercase{\endgroup
2184 \def\HyPsd@EscapeTeX#1{%
2185 \HyPsd@Subst!{|045}#1%
2186 \HyPsd@Subst({|173}#1%
2187 \HyPsd@Subst){|175}#1%
2188 }%

```

2189 }

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.

```
2190 \def\HyPsd@doxspace#1{%
2191   \ifx#1\relax\else
2192   \ifx#1.\else
2193   \ifx#1:\else
2194   \ifx#1,\else
2195   \ifx#1;\else
2196   \ifx#1!\else
2197   \ifx#1?\else
2198   \ifx#1/\else
2199   \ifx#1-\else
2200   \ifx#1'\else
2201     \HyPsd@SPACEOPTI
2202   \fi
2203   \fi
2204   \fi
2205   \fi
2206   \fi
2207   \fi
2208   \fi
2209   \fi
2210   \fi
2211   \fi
2212   #1%
2213 }%
```

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.

```
2214 \begingroup
2215   \catcode`\|=0 %
2216   \catcode`\|=12 %
```

`\HyPsd@ConvertToUnicode`

```
2217 |gdef\HyPsd@ConvertToUnicode#1{%
2218   |xdef#1{%
2219     |expandafter\HyPsd@DoConvert#1|@empty|@empty|@empty
2220   }%
2221   |ifx#1|@empty
2222   |else
2223     |xdef#1{%
2224       \376\377%
2225       #1%
2226     }%
2227   |fi
2228 }%
```

\HyPsd@DoConvert

```

2229 |gdef|HyPsd@DoConvert#1{%
2230   |ifx#1|@empty
2231   |else
2232     |ltx@ReturnAfterFi{%
2233       |ifx#1\%%
2234       \%%
2235       |expandafter|HyPsd@DoEscape
2236     |else
2237       |HyPsd@Char{#1}%
2238       |expandafter|HyPsd@DoConvert
2239     |fi
2240   }%
2241 |fi
2242 }%
```

\HyPsd@DoEscape

```

2243 |gdef|HyPsd@DoEscape#1{%
2244   |ifx#19%
2245     |expandafter|HyPsd@GetTwoBytes
2246   |else
2247     |ltx@ReturnAfterFi{%
2248       |ifx#18%
2249       00%
2250       |expandafter|HyPsd@GetTwoBytes
2251     |else
2252       #1%
2253       |expandafter|HyPsd@GetOneByte
2254     |fi
2255   }%
2256 |fi
2257 }%
```

\HyPsd@GetTwoBytes

```

2258 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2259   #1\#2#3#4%
2260   |HyPsd@DoConvert
2261 }%
```

\HyPsd@GetOneByte

```

2262 |gdef|HyPsd@GetOneByte#1#2{%
2263   #1#2%
2264   |HyPsd@DoConvert
2265 }%
2266 |endgroup
```

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

```

2267 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2268   \xdef#4{#4#1#2}%
2269   \HyPsd@@ConvertToUnicode#3\END#4%
2270 }
```

\HyPsd@Char

```

2271 \begingroup
2272 \catcode0=9 %
2273 \catcode`\^=7 %
```



```

2274 \catcode\^^^=12 %
2275 \def\x{^^^^0000}%
2276 \expandafter\endgroup
2277 \ifx\x\@empty
2278 \def\HyPsd@Char#1{%
2279 \ifnum`#1<128 %
2280 \@backslashchar 000#1%
2281 \else
2282 \ifnum`#1<65536 %
2283 \expandafter\HyPsd@CharTwoByte\number`#1!%
2284 \else
2285 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2286 \intcalcSub{`#1}{65536}!%
2287 \fi
2288 \fi
2289 }%
2290 \def\HyPsd@CharTwoByte#1!{%
2291 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2292 \IntCalcDiv#1!256!!%
2293 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2294 \IntCalcMod#1!256!!%
2295 }%
2296 \def\HyPsd@CharOctByte#1!{%
2297 \@backslashchar
2298 \IntCalcDiv#1!64!%
2299 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2300 \IntCalcMod#1!8!%
2301 }%
2302 \def\HyPsd@CharSurrogate#1!{%
2303 \@backslashchar 33%
2304 \IntCalcDiv#1!262144!%
2305 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2306 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2307 \@backslashchar 33%
2308 \expandafter\expandafter\expandafter\IntCalcAdd
2309 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \IntCalcMod#1!256!!%
2312 }%
2313 \else
2314 \def\HyPsd@Char#1{%
2315 \@backslashchar 000#1%
2316 }%
2317 \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

```

```

2318 \begingroup\expandafter\expandafter\expandafter\endgroup
2319 \expandafter\ifx\csname numexpr\endcsname\relax
2320 \let\HyPsd@UTFviii\relax
2321 \else
2322 \begingroup
2323 \lccode\~=`^^f4\relax
2324 \lowercase{\endgroup
2325 \def\HyPsd@UTFviii{%
2326 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2327 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2328 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2329 \ifx~\HyPsd@UTFviii@ccxliv@undef
2330 \let~\HyPsd@UTFviii@ccxliv@def
2331 \fi
2332 \let\unichar\HyPsd@unichar
2333 }%
2334 }%
2335 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2336 \edef\HyPsd@UTFviii@ccxliv@def{%
2337 \noexpand\UTFviii@four@octets\string ^^f4%
2338 }%

```

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.

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

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

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

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

$$(5)$$

```

2339 \def\HyPsd@UTFviii@two#1#2{%
2340 \expandafter\HyPsd@UTFviii@@two
2341 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2342 \number`#1\expandafter|
2343 \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
2344 \number`#2 \@nil
2345 }%
2346 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2347 \expandafter\8%
2348 \number\dimexpr #1-48\expandafter\relax
2349 \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2350 \number\dimexpr #3-8*%
2351 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2352 \number\dimexpr #4-8*#3\relax
2353 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2354 \def\HyPsd@UTFviii@three#1#2#3{%
2355   \expandafter\HyPsd@UTFviii@@three
2356     \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2357     \number`#1\expandafter|
2358     \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
2359     \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
2360     \number`#2\expandafter|
2361     \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
2362     \number`#3 \@nil
2363 }%
2364 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2365   \expandafter\9%
2366   \number\numexpr #1-56\expandafter\relax
2367   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2368   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2369   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2370   \number\numexpr #6-16\expandafter\relax
2371   \number\numexpr #7-8*#6\relax
2372 }%

```

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: 11110uuu10uuzzzz10yyyyyy10xxxxxx
www=uuuuuu-1
UTF-16: 110110wwwwzzzzyy110111yyyyyyyyxxxxxx
octal: 0110110ww0wwzzzzyy0110111yyy0yyxxx0xxx
```

```

2373 \def\HyPsd@UTFviii@four#1#2{%
2374 \expandafter\HyPsd@@UTFviii@four\number
2375 \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2376 \expandafter|\number
2377 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|}%
2378 }%
2379 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2380 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2381 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2382 \ifodd#2 %
2383 \number\dimexpr(#2-1)/2\relax
2384 \else
2385 \number\dimexpr#2/2\relax
2386 \fi
2387 \number\dimexpr\ifodd#2 4+\fi
2388 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2389 \933%
2390 \expandafter\HyPsd@@@UTFviii@four\number
2391 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp|}%
2392 }%
2393 \def\HyPsd@@@UTFviii@four#1|#2{%
2394 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2395 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2396 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2397 \number\dimexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2398 }%

```

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

```

2399 \def\HyPsd@unichar#1{%
2400 \ifHy@unicode
2401 \ifnum#1>"10FFFF %
2402 \HyPsd@UnicodeReplacementCharacter % illegal
2403 \else
2404 \ifnum#1>"FFFF %

```

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

```

2405 \expandafter\HyPsd@unichar\expandafter{%
2406 \number\numexpr 55296+%
2407 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2408 \relax\relax\relax
2409 }%

```

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

```

2410 \expandafter\HyPsd@unichar\expandafter{%
2411 \number\numexpr#1-9216%
2412 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%
2415 \else
2416 \ifnum#1>"7FF %
2417 \9%
2418 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2419 \number
2420 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2421 }%
2422 \else
2423 \8%
2424 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 \fi
2426 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2427 \number
2428 \numexpr#1-256*\number
2429 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2430 }%
2431 \fi
2432 \fi
2433 \else
2434 .% unsupported (Unicode -> PDF Doc Encoding)
2435 \fi
2436 }%
2437 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2438 \def\HyPsd@unichar@first@byte#1{%
2439 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2440 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2441 \number
2442 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2443 \relax\relax\relax
2444 }%
2445 }%
2446 \def\HyPsd@unichar@second@byte#1{%
2447 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2448 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2449 \number
2450 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%

```

```

2451 \relax\relax\relax
2452 }%
2453 }%
2454 \def\HyPsd@unichar@octtwo#1{%
2455 \number\dimexpr.125\dimexpr#1sp\relax\relax
2456 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2457 \relax\relax\relax
2458 }%
2459 \fi

```

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

```

2460 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2461 \ifx\@gobble#1%
2462 \else
2463 [Please insert \textbackslash PrerenderUnicode%
2464 \textbraceleft#1\textbraceright\space
2465 into preamble]%
2466 \fi
2467 }%

```

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

`\HyPsd@DieFace` Die faces are provided by

Package	Macro
ifsym	<code>\Cube</code>
epsdice	<code>\epsdice</code>
hhcount	<code>\fcdice</code>

`\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`.

```

2468 \def\HyPsd@DieFace#1{%
2469 \ifHy@unicode
2470 \ifnum#1<1 %
2471 \HyPsd@UnicodeReplacementCharacter
2472 \else
2473 \ifnum#1>6 %
2474 \9046\205%
2475 \expandafter\expandafter\expandafter
2476 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2477 \else
2478 \9046\20\intcalcDec{#1}%
2479 \fi
2480 \fi
2481 \else
2482 .% Die faces are not part of PDFDocEncoding
2483 \fi
2484 }

```

`\HyPsd@DieFaceLarge`

```

2485 \def\HyPsd@DieFaceLarge#1{%
2486 \ifnum#1>6 %
2487 \expandafter\ltx@firstoftwo
2488 \else
2489 \expandafter\ltx@secondoftwo

```

```

2490 \fi
2491 {%
2492 \9046\205%
2493 \expandafter\expandafter\expandafter
2494 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2495 }{%
2496 \9046\20\IntCalcDec#1!%
2497 }%
2498 }

```

6.6.11 Support for moon phases of package china2e

```

2499 \def\HyPsd@MoonPha#1{%
2500 \ifcase\intcalcNum{#1} %
2501 \HyPsd@UnicodeReplacementCharacter
2502 \or % 1
2503 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2504 \9330\074\9337\032%
2505 \or % 2
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 3
2508 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2509 \9330\074\9337\035%
2510 \or % 4
2511 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2512 \9330\074\9337\034%
2513 \else
2514 \HyPsd@UnicodeReplacementCharacter
2515 \fi
2516 }
2517 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2518 \def\HyPsd@ding#1{%
2519 \ifHy@unicode
2520 \ifnum#1<32 %
2521 \HyPsd@UnicodeReplacementCharacter
2522 \else
2523 \ifnum#1>254 %
2524 \HyPsd@UnicodeReplacementCharacter
2525 \else
2526 \ifnum#1<127 %
2527 \expandafter\expandafter\expandafter
2528 \HyPsd@@ding\intcalcNum{#1}!%
2529 \else
2530 \ifnum#1>160 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@ding\intcalcNum{#1}!%
2533 \else
2534 \HyPsd@UnicodeReplacementCharacter
2535 \fi
2536 \fi
2537 \fi
2538 \fi
2539 \else
2540 .% Dingbats are not part of PDFDocEncoding

```

```

2541 \fi
2542 }

\HyPsd@@ding
2543 \def\HyPsd@@ding#1!{%
2544 \ltx@ifundefined{HyPsd@ding@#1}{%
2545 \ifnum#1<127 %
2546 \9047%
2547 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2548 \else
2549 \ifnum#1<168 %
2550 \9047\14\IntCalcSub#1!160!%
2551 \else
2552 \ifnum#1>181 %
2553 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2554 \else
2555 % 172..181 -> U+2460..U+2469
2556 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2557 \fi
2558 \fi
2559 \fi
2560 }{%
2561 \csname HyPsd@ding@#1\endcsname
2562 }%
2563 }

2564 \@namedef{HyPsd@ding@32}{\space}
2565 % U+260E BLACK TELEPHONE
2566 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2567 % U+261B BLACK RIGHT POINTING INDEX
2568 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2569 % U+261E WHITE RIGHT POINTING INDEX
2570 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2571 % U+2605 BLACK STAR
2572 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2573 % U+25CF BLACK CIRCLE
2574 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2575 % U+25A0 BLACK SQUARE
2576 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2577 % U+25B2 BLACK UP-POINTING TRIANGLE
2578 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2579 % U+25BC BLACK DOWN-POINTING TRIANGLE
2580 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2581 % U+25C6 BLACK DIAMOND
2582 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2583 % U+25D7 RIGHT HALF BLACK CIRCLE
2584 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2585 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2586 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2587 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2588 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2589 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2590 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2591 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2592 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```
2593 \@ifclassloaded{memoir}{%
2594   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2595 }
```

7.2 Package subfigure

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

```
2596 \@ifpackageloaded{subfigure}{%
2597   \ltx@ifundefined{sub@label}{%
2598     \Hy@hypertexnamesfalse
2599   }{%
2600     \renewcommand*{\sub@label}[1]{%
2601       \@bsphack
2602       \subfig@oldlabel{#1}%
2603       \if@filesw
2604         \begingroup
2605           \edef\@currentlabstr{%
2606             \expandafter\strip@prefix\meaning\@currentlabelname
2607           }%
2608           \protected@write\@auxout{}{%
2609             \string\newlabel{sub@#1}{%
2610               {\@nameuse{\@thesub\@capttype}}%
2611               {\thepage}%
2612             }%
2613             \expandafter\strip@period\@currentlabstr
2614             \relax.\relax\@@@%
2615           }%
2616           {\@currentHref}%
2617           {}%
2618         }%
2619       }%
2620     \endgroup
2621   \fi
2622   \@esphack
2623 }%
2624 \@ifpackagelater{subfigure}{2002/03/26}{%
2625   \providecommand*{\toclevel@subfigure}{1}%
2626   \providecommand*{\toclevel@subtable}{1}%
2627 }%
2628 }%
2629 }
```

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:

```
2630 \ltx@ifundefined{XR@addURL}{%
2631 }
```

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.

```
2632 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2633 \def\xr@dURL#1#2#3#4#5\\{%
2634   {#1}{#2}%
2635 }
```



```

2635 \if!#4!%
2636 \else
2637   {#3}{#4}{\XR@URL}%
2638 \fi
2639 }%
2640 }

2641 \def\Hy@true{true}
2642 \def\Hy@false{false}

```

Providing dummy definitions.

```

2643 \let\literalps@out\@gobble
2644 \newcommand\pdfbookmark[3][]{ }
2645 \def\Acrobatmenu#1#2{\leavevmode#2}
2646 \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

```

2647 \let\HyperRaiseLinkHook\@empty
2648 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2649 \newcount\Hy@SavedSpaceFactor
2650 \def\Hy@SaveSpaceFactor{%
2651   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2652 }
2653 \def\Hy@RestoreSpaceFactor{%
2654   \relax
2655   \ifhmode
2656     \ifnum\Hy@SavedSpaceFactor>\z@
2657       \spacefactor=\Hy@SavedSpaceFactor
2658     \fi
2659   \fi
2660 }
2661 \def\Hy@SaveSavedSpaceFactor{%
2662   \edef\Hy@RestoreSavedSpaceFactor{%
2663     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2664   }%
2665 }
2666 \def\Hy@raisedlink#1{%
2667   \ifvmode
2668     #1%
2669   \else
2670     \Hy@SaveSpaceFactor
2671     \penalty\@M

```

```

2672 \smash{%
2673 \begingroup
2674 \let\HyperRaiseLinkLength\@tempdima
2675 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2676 \HyperRaiseLinkHook
2677 \expandafter\endgroup
2678 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2679 \Hy@RestoreSpaceFactor
2680 #1%
2681 \Hy@SaveSpaceFactor
2682 }%
2683 }%
2684 \Hy@RestoreSpaceFactor
2685 \fi
2686 }

```

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

```

2687 \def\Hy@SaveLastskip{%
2688 \let\Hy@RestoreLastskip\relax
2689 \ifvmode
2690 \ifdim\lastskip=\z@
2691 \let\Hy@RestoreLastskip\nobreak
2692 \else
2693 \begingroup
2694 \skip@=-\lastskip
2695 \edef\x{%
2696 \endgroup
2697 \def\noexpand\Hy@RestoreLastskip{%
2698 \noexpand\ifvmode
2699 \noexpand\nobreak
2700 \vskip\the\skip@
2701 \vskip\the\lastskip\relax
2702 \noexpand\fi
2703 }%
2704 }%
2705 \x
2706 \fi
2707 \else
2708 \ifhmode
2709 \ifdim\lastskip=\z@
2710 \let\Hy@RestoreLastskip\nobreak
2711 \else
2712 \begingroup
2713 \skip@=-\lastskip
2714 \edef\x{%
2715 \endgroup
2716 \def\noexpand\Hy@RestoreLastskip{%
2717 \noexpand\ifhmode
2718 \noexpand\nobreak
2719 \hskip\the\skip@
2720 \hskip\the\lastskip\relax
2721 \noexpand\fi
2722 }%
2723 }%
2724 \x
2725 \fi
2726 \fi

```

```

2727 \fi
2728 }%

```

9 Options

```

2729 \SetupKeyvalOptions{%
2730   family=Hyp,%
2731   prefix=HyOpt%
2732 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2733 \def\IfHyperBooleanExists#1{%
2734   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2735     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2736   }%
2737 }

2738 \@namedef{KV@Hyp@stoppeearly@default}{ }

```

\IfHyperBoolean

```

2739 \def\IfHyperBoolean#1{%
2740   \IfHyperBooleanExists{#1}{%
2741     \csname ifHy@#1\endcsname
2742     \expandafter\ltx@firstoftwo
2743   \else
2744     \expandafter\ltx@secondoftwo
2745   \fi
2746 } \ltx@secondoftwo
2747 }

```

\Hy@boolkey

```

2748 \def\Hy@boolkey#1#2{%
2749   \edef\Hy@tempa{#2}%
2750   \lowercase\expandafter{%
2751     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2752   }%
2753   \ifx\Hy@tempa\@empty
2754     \let\Hy@tempa\Hy@true
2755   \fi
2756   \ifx\Hy@tempa\Hy@true
2757   \else
2758     \ifx\Hy@tempa\Hy@false
2759     \else
2760       \let\Hy@tempa\relax
2761     \fi
2762   \fi
2763   \ifx\Hy@tempa\relax
2764     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2765   \else
2766     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2767     \csname Hy@#1\Hy@tempa\endcsname
2768   \fi
2769 }

```

\Hy@WarnOptionValue

```

2770 \def\Hy@WarnOptionValue#1#2#3{%
2771   \Hy@Warning{%
2772     Unexpected value `#1'\MessageBreak
2773     of option `#2' instead of\MessageBreak
2774     #3%
2775   }%
2776 }

```

\Hy@DisableOption

```

2777 \def\Hy@DisableOption#1{%
2778   \ltx@ifundefined{KV@Hyp@#1@default}{%
2779     \define@key{Hyp}{#1}%
2780   }{%
2781     \define@key{Hyp}{#1}[]%
2782   }%
2783   {\Hy@WarnOptionDisabled{#1}}%
2784 }
2785

```

\Hy@WarnOptionDisabled

```

2786 \def\Hy@WarnOptionDisabled#1{%
2787   \Hy@Warning{%
2788     Option `#1' has already been used,\MessageBreak
2789     setting the option has no effect%
2790   }%
2791 }

```

\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.

```

2792 \def\Hy@CheckOptionValue#1#2#3{%
2793   \begingroup
2794   \edef\x{#1}%
2795   \@onelevel@sanitize\x
2796   \let\y=y%
2797   \def\do##1##2{%
2798     \def\z{##1}%
2799     \@onelevel@sanitize\z
2800     \ifx\x\z
2801       \let\y=n%
2802     \let\do\@gobbletwo
2803   \fi
2804   }%
2805   #3%
2806   \ifx\y y%
2807     \def\do##1##2{%
2808       * `##1'%
2809       \ifx\##2\\\else\space(##2)\fi
2810     \MessageBreak
2811   }%
2812   \Hy@Warning{%
2813     Values of option `#2':\MessageBreak
2814     #3%
2815     * An empty value disables the option.\MessageBreak
2816     Unknown value `x'%
2817   }%

```

```

2818   \fi
2819   \endgroup
2820 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument
is a comment.
2821 \def\Hy@DefNameKey#1{%
2822   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2823 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2824 \def\Hy@@DefNameKey#1#2#3{%
2825   \define@key{Hyp}{#2}{%
2826     \edef#1{##1}%
2827     \ifx#1\@empty
2828     \else
2829       \Hy@CheckOptionValue{##1}{#2}{#3}%
2830     \fi
2831   }%
2832   \let#1\@empty
2833 }

\Hy@UseNameKey
2834 \def\Hy@UseNameKey#1#2{%
2835   \ifx#2\@empty
2836   \else
2837     /#1/#2%
2838   \fi
2839 }

```

9.2 Defining the options

```

2840 \define@key{Hyp}{implicit}[true]{%
2841   \Hy@boolkey{implicit}{#1}%
2842 }
2843 \define@key{Hyp}{draft}[true]{%
2844   \Hy@boolkey{draft}{#1}%
2845 }
2846 \define@key{Hyp}{final}[true]{%
2847   \Hy@boolkey{final}{#1}%
2848 }
2849 \let\KV@Hyp@nolinks\KV@Hyp@draft
2850 \def\Hy@ObsoletePaperOption#1{%
2851   \Hy@WarningNoLine{%
2852     Option `#1' is no longer used%
2853   }%
2854   \define@key{Hyp}{#1}[true]{}%
2855 }
2856 \def\Hy@temp#1{%
2857   \define@key{Hyp}{#1}[true]{%
2858     \Hy@ObsoletePaperOption{#1}%
2859   }%
2860 }

```

```

2861 \Hy@temp{a4paper}
2862 \Hy@temp{a5paper}
2863 \Hy@temp{b5paper}
2864 \Hy@temp{letterpaper}
2865 \Hy@temp{legalpaper}
2866 \Hy@temp{executivepaper}

2867 \define@key{Hyp}{setpagesize}[true]{%
2868   \Hy@boolkey{setpagesize}{#1}%
2869 }
2870 \define@key{Hyp}{debug}[true]{%
2871   \Hy@boolkey{debug}{#1}%
2872 }
2873 \define@key{Hyp}{linktocpage}[true]{%
2874   \Hy@boolkey{linktocpage}{#1}%
2875   \ifHy@linktocpage
2876     \let\Hy@linktoc\Hy@linktoc@page
2877   \else
2878     \let\Hy@linktoc\Hy@linktoc@section
2879   \fi
2880 }
2881 \chardef\Hy@linktoc@none=0 %
2882 \chardef\Hy@linktoc@section=1 %
2883 \chardef\Hy@linktoc@page=2 %
2884 \chardef\Hy@linktoc@all=3 %
2885 \ifHy@linktocpage
2886   \let\Hy@linktoc\Hy@linktoc@page
2887 \else
2888   \let\Hy@linktoc\Hy@linktoc@section
2889 \fi
2890 \define@key{Hyp}{linktoc}{%
2891   \@ifundefined{Hy@linktoc@#1}{%
2892     \Hy@Warning{%
2893       Unexpected value `#1' of\MessageBreak
2894       option `linktoc' instead of `none',\MessageBreak
2895       `section', `page' or `all'%
2896     }%
2897   }{%
2898     \expandafter\let\expandafter\Hy@linktoc
2899     \csname Hy@linktoc@#1\endcsname
2900   }%
2901 }
2902 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2903 \let\XR@ext\relax
2904 \define@key{Hyp}{verbose}[true]{%
2905   \Hy@boolkey{verbose}{#1}%
2906 }
2907 \define@key{Hyp}{typexml}[true]{%
2908   \Hy@boolkey{typexml}{#1}%
2909 }

```

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.

```

2910 \define@key{Hyp}{raiselinks}[true]{%
2911   \Hy@boolkey{raiselinks}{#1}%
2912 }

```

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

```

2913 \def\Hy@setbreaklinks#1{%
2914   \csname breaklinks#1\endcsname
2915 }
2916 \def\Hy@breaklinks@unsupported{%
2917   \ifx\Hy@setbreaklinks\@gobble
2918     \ifHy@breaklinks
2919       \Hy@WarningNoLine{%
2920         You have enabled option `breaklinks'.\MessageBreak
2921         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2922         Expect trouble with the link areas of broken links%
2923       }%
2924     \fi
2925   \fi
2926 }
2927 \define@key{Hyp}{breaklinks}[true]{%
2928   \Hy@boolkey{breaklinks}{#1}%
2929   \let\Hy@setbreaklinks\@gobble
2930 }
2931 \define@key{Hyp}{localanchorname}[true]{%
2932   \Hy@boolkey{localanchorname}{#1}%
2933 }

```

Determines whether an automatic anchor is put on each page

```

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

```

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.

```

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

```

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

```

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

```

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

```

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

```

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

```

2946 \define@key{Hyp}{nesting}[true]{%
2947   \Hy@boolkey{nesting}{#1}%
2948 }
2949 \define@key{Hyp}{destlabel}[true]{%
2950   \Hy@boolkey{destlabel}{#1}%
2951 }

```

```

2952 \define@key{Hyp}{unicode}[true]{%
2953   \Hy@boolkey{unicode}{#1}%
2954   \ifHy@unicode
2955     \def\HyPsd@pdfencoding{unicode}%

```

```

2956 \HyPsd@LoadUnicode
2957 \else
2958 \def\HyPsd@pdfencoding{pdfdoc}%
2959 \fi
2960 }
2961 \Hy@AtBeginDocument{%
2962 \ifx\HyPsd@LoadUnicode\relax
2963 \else
2964 \def\HyPsd@LoadUnicode{%
2965 \Hy@Error{%
2966 Unicode support for bookmarks is not available.\MessageBreak
2967 Activate unicode support by using one of the options\MessageBreak
2968 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2969 in the preamble%
2970 } \@ehc
2971 \global\let\HyPsd@LoadUnicode\relax
2972 \global\Hy@unicodedefalse
2973 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2974 }%
2975 \fi
2976 }

2977 \define@key{Hyp}{pdfencoding}{%
2978 \edef\HyPsd@temp{#1}%
2979 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2980 \let\HyPsd@pdfencoding\HyPsd@temp
2981 \Hy@unicodedefalse
2982 \else
2983 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2984 \z@
2985 \else
2986 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2987 \z@
2988 \else
2989 \@ne
2990 \fi
2991 \fi
2992 \let\HyPsd@pdfencoding\HyPsd@temp
2993 \hypersetup{unicode}%
2994 \ifHy@unicode
2995 \def\HyPsd@pdfencoding{#1}%
2996 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2997 \HyPsd@LoadStringEncoding
2998 \fi
2999 \else
3000 \Hy@Warning{Cannot switch to unicode bookmarks}%
3001 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3002 \fi
3003 \else
3004 \@onelevel@sanitize\HyPsd@temp
3005 \Hy@Warning{%
3006 Values of option `pdfencoding':\MessageBreak
3007 `pdfdoc', `unicode', `auto'.\MessageBreak
3008 Ignoring unknown value ``\HyPsd@temp'%
3009 }%
3010 \fi
3011 \fi
3012 }

```



```

3013 \def\HyPsd@pdfencoding@auto{auto}
3014 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3015 \def\HyPsd@pdfencoding@unicode{unicode}
3016 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3017 \def\HyPsd@LoadStringEnc{%
3018   \RequirePackage{stringenc}[2009/12/15]%
3019   \let\HyPsd@LoadStringEnc\relax
3020 }
3021 \Hy@AtBeginDocument{%
3022   \ifpackageloaded{stringenc}{%
3023     \let\HyPsd@LoadStringEnc\relax
3024   }{%
3025     \def\HyPsd@LoadStringEnc{%
3026       \Hy@WarningNoLine{%
3027         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3028         in the preamble or load the package there%
3029       }%
3030     }%
3031   }%
3032 }

3033 \define@key{Hyp}{psdextra}[true]{%
3034   \Hy@boolkey{psdextra}{#1}%
3035   \HyPsd@LoadExtra
3036 }

3037 \def\hypersetup{\kvsetkeys{Hyp}}

3038 \newif\ifHy@setpdfversion
3039 \define@key{Hyp}{pdfversion}{%
3040   \ifundefined{Hy@pdfversion@#1}{%
3041     \PackageWarning{hyperref}{%
3042       Unsupported PDF version `#1'.\MessageBreak
3043       Valid values: 1.2 until 1.9%
3044     }%
3045   }{%
3046     \Hy@setpdfversiontrue
3047     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3048   }%
3049 }
3050 \@namedef{Hy@pdfversion@1.2}{2}%
3051 \@namedef{Hy@pdfversion@1.3}{3}%
3052 \@namedef{Hy@pdfversion@1.4}{4}%
3053 \@namedef{Hy@pdfversion@1.5}{5}%
3054 \@namedef{Hy@pdfversion@1.6}{6}%
3055 \@namedef{Hy@pdfversion@1.7}{7}%
3056 \@namedef{Hy@pdfversion@1.8}{8}%
3057 \@namedef{Hy@pdfversion@1.9}{9}%
3058 \def\Hy@pdfversion{5}

```

10 Options for different drivers

```

3059 \newif\ifHy@DviMode
3060 \let\Hy@DviErrMsg\ltx@empty
3061 \ifpdf
3062   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3063 \else
3064   \ifxetex
3065     \def\Hy@DviErrMsg{XeTeX is running}%

```

```

3066 \else
3067   \ifvtex
3068     \ifnum\OpMode=\z@
3069       \Hy@DviModetrue
3070     \else
3071       \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3072     \fi
3073   \else
3074     \Hy@DviModetrue
3075   \fi
3076 \fi
3077 \fi
3078 \def\HyOpt@CheckDvi#1{%
3079   \ifHy@DviMode
3080     \expandafter\ltx@firstofone
3081   \else
3082     \Hy@Error{%
3083       Wrong DVI mode driver option `#1',\MessageBreak
3084       because \Hy@DviErrMsg
3085     }\@ehc
3086     \expandafter\ltx@gobble
3087   \fi
3088 }

3089 \DeclareVoidOption{tex4ht}{%
3090   \Hy@texhttrue
3091   \kvsetkeys{Hyp}{colorlinks=true}%
3092   \def\BeforeTeXIVht{\RequirePackage{color}}%
3093   \def\Hy@driver{htex4ht}%
3094   \def\MaybeStopEarly{%
3095     \Hy@Message{Stopped early}%
3096     \Hy@AtBeginDocument{%
3097       \PDF@FinishDoc
3098       \gdef\PDF@FinishDoc{}%
3099     }%
3100   \endinput
3101 }%
3102 }

3103 \DeclareVoidOption{pdftex}{%
3104   \ifpdf
3105     \def\Hy@driver{hpdftex}%
3106     \PassOptionsToPackage{pdftex}{color}%
3107   \else
3108     \Hy@Error{%
3109       Wrong driver option `pdftex',\MessageBreak
3110       because pdfTeX in PDF mode is not detected%
3111     }\@ehc
3112   \fi
3113 }

3114 \DeclareVoidOption{luatex}{%
3115   \ifpdf
3116     \ifx\pdfextension\@undefined
3117       \def\Hy@driver{hpdftex}%
3118       \PassOptionsToPackage{pdftex}{color}%
3119     \else
3120       \def\Hy@driver{hluatex}%
3121       \PassOptionsToPackage{luatex}{color}%
3122     \fi

```

```

3123 \else
3124   \Hy@Error{%
3125     Wrong driver option `luatex',\MessageBreak
3126     because luaTeX in PDF mode is not detected%
3127   }\@ehc
3128 \fi
3129 }
3130 \DeclareVoidOption{nativepdf}{%
3131   \HyOpt@CheckDvi{nativepdf}{%
3132     \def\Hy@driver{hdvips}%
3133     \PassOptionsToPackage{dvips}{color}%
3134   }%
3135 }
3136 \DeclareVoidOption{dvipdfm}{%
3137   \HyOpt@CheckDvi{dvipdfm}{%
3138     \def\Hy@driver{hdvipdfm}%
3139   }%
3140 }
3141 \DeclareVoidOption{dvipdfmx}{%
3142   \HyOpt@CheckDvi{dvipdfmx}{%
3143     \def\Hy@driver{hdvipdfm}%
3144     \PassOptionsToPackage{dvipdfmx}{color}%
3145   }%
3146 }
3147 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3148   \expandafter\ifx\csname if#1\expandafter\endcsname
3149     \csname iftrue\endcsname
3150   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3151 \else
3152   \chardef\SpecialDvipdfmxOutlineOpen\z@
3153 \fi
3154 }
3155 \DeclareVoidOption{xetex}{%
3156   \ifxetex
3157     \def\Hy@driver{hxetex}%
3158   \else
3159     \Hy@Error{%
3160       Wrong driver option `xetex',\MessageBreak
3161       because XeTeX is not detected%
3162     }\@ehc
3163   \fi
3164 }
3165 \DeclareVoidOption{pdfmark}{%
3166   \HyOpt@CheckDvi{pdfmark}{%
3167     \def\Hy@driver{hdvips}%
3168   }%
3169 }
3170 \DeclareVoidOption{dvips}{%
3171   \HyOpt@CheckDvi{dvips}{%
3172     \def\Hy@driver{hdvips}%
3173     \PassOptionsToPackage{dvips}{color}%
3174   }%
3175 }
3176 \DeclareVoidOption{hypertex}{%
3177   \HyOpt@CheckDvi{hypertex}{%
3178     \def\Hy@driver{hypertex}%
3179   }%

```

```

3180 }
3181 \let\Hy@MaybeStopNow\relax
3182 \DeclareVoidOption{vtex}{%
3183   \ifvtex
3184     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3185     \def\Hy@driver{hvtex}%
3186   \else
3187     \ifnum\OpMode=10\relax
3188     \def\Hy@driver{hvtexhtm}%
3189     \def\MaybeStopEarly{%
3190       \Hy@Message{Stopped early}%
3191       \Hy@AtBeginDocument{%
3192         \PDF@FinishDoc
3193         \gdef\PDF@FinishDoc{}}%
3194       }%
3195     \endinput
3196   }%
3197 \else
3198   \Hy@Error{%
3199     Wrong driver option `vtex',\MessageBreak
3200     because of wrong OpMode (\the\OpMode)%
3201   }\@ehc
3202 \fi
3203 \fi
3204 \else
3205   \Hy@Error{%
3206     Wrong driver option `vtex',\MessageBreak
3207     because VTeX is not running%
3208   }\@ehc
3209 \fi
3210 }
3211 \DeclareVoidOption{vtexpdfmark}{%
3212   \ifvtex
3213     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3214     \def\Hy@driver{hvtexmrk}%
3215   \else
3216     \Hy@Error{%
3217       Wrong driver option `vtexpdfmark',\MessageBreak
3218       because of wrong OpMode (\the\OpMode)%
3219     }\@ehc
3220   \fi
3221 \else
3222   \Hy@Error{%
3223     Wrong driver option `vtexpdfmark',\MessageBreak
3224     because VTeX is not running%
3225   }\@ehc
3226 \fi
3227 }
3228 \DeclareVoidOption{dviwindo}{%
3229   \HyOpt@CheckDvi{dviwindo}{%
3230     \def\Hy@driver{hdviwind}%
3231     \kvsetkeys{Hyp}{colorlinks}%
3232     \PassOptionsToPackage{dviwindo}{color}%
3233   }%
3234 }
3235 \DeclareVoidOption{dvipsone}{%
3236   \HyOpt@CheckDvi{dvipsone}{%

```

```

3237 \def\Hy@driver{hdvipson}%
3238 \PassOptionsToPackage{dvipsone}{color}%
3239 }%
3240 }
3241 \DeclareVoidOption{textures}{%
3242 \HyOpt@CheckDvi{textures}{%
3243 \def\Hy@driver{htexture}%
3244 }%
3245 }
3246 \DeclareVoidOption{latex2html}{%
3247 \HyOpt@CheckDvi{latex2html}{%
3248 \Hy@AtBeginDocument{\@latex2htmlX}%
3249 }%
3250 }

```

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

```

3251 \DeclareVoidOption{ps2pdf}{%
3252 \HyOpt@CheckDvi{ps2pdf}{%
3253 \def\Hy@driver{hdvips}%
3254 \PassOptionsToPackage{dvips}{color}%
3255 }%
3256 }
3257 \let\HyOpt@DriverFallback\ltx@empty
3258 \define@key{Hyp}{driverfallback}{%
3259 \ifHy@DviMode
3260 \def\HyOpt@DriverFallback{#1}%
3261 \Hy@Match\HyOpt@DriverFallback}{%
3262 ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3263 latex2html|tex4ht)$%
3264 }~}{%
3265 \Hy@Warning{%
3266 Invalid driver `#1' for option\MessageBreak
3267 `driverfallback'%
3268 }%
3269 \let\HyOpt@DriverFallback\ltx@empty
3270 }%
3271 \fi
3272 }
3273 \let\HyOpt@CustomDriver\ltx@empty
3274 \define@key{Hyp}{customdriver}{%
3275 \IfFileExists{#1.def}{%
3276 \def\HyOpt@CustomDriver{#1}%
3277 }~}{%
3278 \Hy@Warning{%
3279 Missing driver file `#1.def',\MessageBreak
3280 ignoring custom driver%
3281 }%
3282 }%
3283 }

```

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.

```

3284 \define@key{Hyp}{hyperfigures}[true]{%
3285 \Hy@boolkey{hyperfigures}{#1}%
3286 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

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

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

```
3290 \def\back@none{none}
3291 \def\back@section{section}
3292 \def\back@page{page}
3293 \def\back@slide{slide}
3294 \define@key{Hyp}{backref}[section]{%
3295   \lowercase{\def\Hy@tempa{#1}}%
3296   \ifx\Hy@tempa\@empty
3297     \let\Hy@tempa\back@section
3298   \fi
3299   \ifx\Hy@tempa\Hy@false
3300     \let\Hy@tempa\back@none
3301   \fi
3302   \ifx\Hy@tempa\back@slide
3303     \let\Hy@tempa\back@section
3304   \fi
3305   \ifx\Hy@tempa\back@page
3306     \PassOptionsToPackage{hyperpageref}{backref}%
3307     \Hy@backreftrue
3308   \else
3309     \ifx\Hy@tempa\back@section
3310       \PassOptionsToPackage{hyperref}{backref}%
3311       \Hy@backreftrue
3312     \else
3313       \ifx\Hy@tempa\back@none
3314         \Hy@backreffalse
3315       \else
3316         \Hy@WarnOptionValue{#1}{backref}{%
3317           `section', `slide', `page', `none',\MessageBreak
3318           or `false'}%
3319       \fi
3320     \fi
3321   \fi
3322 }
3323 \define@key{Hyp}{pagebackref}[true]{%
3324   \edef\Hy@tempa{#1}%
3325   \lowercase\expandafter{%
3326     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3327   }%
3328   \ifx\Hy@tempa\@empty
3329     \let\Hy@tempa\Hy@true
3330   \fi
3331   \ifx\Hy@tempa\Hy@true
3332     \PassOptionsToPackage{hyperpageref}{backref}%
3333     \Hy@backreftrue
3334   \else
3335     \ifx\Hy@tempa\Hy@false
3336       \Hy@backreffalse
3337     \else
3338       \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3339     \fi
3340   \fi
3341 }
```

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

```
3342 \define@key{Hyp}{hyperindex}[true]{%
3343   \Hy@boolkey{hyperindex}{#1}%
3344 }
```

Configuration of encap char.

```
3345 \define@key{Hyp}{encap}[|]{%
3346   \def\HyInd@EncapChar{#1}%
3347 }
```

12 Language options

The `\autoref` feature depends on the language.

```
3348 \def\HyLang@afrikaans{%
3349   \def\equationautorefname{Vergelyking}%
3350   \def\footnoteautorefname{Voetnota}%
3351   \def\itemautorefname{Item}%
3352   \def\figureautorefname{Figuur}%
3353   \def\tableautorefname{Tabel}%
3354   \def\partautorefname{Deel}%
3355   \def\appendixautorefname{Bylae}%
3356   \def\chapterautorefname{Hoofstuk}%
3357   \def\sectionautorefname{Afdeling}%
3358   \def\subsectionautorefname{Subafdeling}%
3359   \def\subsubsectionautorefname{Subsubafdeling}%
3360   \def\paragraphautorefname{Paragraaf}%
3361   \def\subparagraphautorefname{Subparagraaf}%
3362   \def\FancyVerbLineautorefname{Lyn}%
3363   \def\theoremautorefname{Teorema}%
3364   \def\pageautorefname{Bladsy}%
3365 }
3366 \def\HyLang@english{%
3367   \def\equationautorefname{Equation}%
3368   \def\footnoteautorefname{footnote}%
3369   \def\itemautorefname{item}%
3370   \def\figureautorefname{Figure}%
3371   \def\tableautorefname{Table}%
3372   \def\partautorefname{Part}%
3373   \def\appendixautorefname{Appendix}%
3374   \def\chapterautorefname{chapter}%
3375   \def\sectionautorefname{section}%
3376   \def\subsectionautorefname{subsection}%
3377   \def\subsubsectionautorefname{subsubsection}%
3378   \def\paragraphautorefname{paragraph}%
3379   \def\subparagraphautorefname{subparagraph}%
3380   \def\FancyVerbLineautorefname{line}%
3381   \def\theoremautorefname{Theorem}%
3382   \def\pageautorefname{page}%
3383 }
3384 \def\HyLang@french{%
3385   \def\equationautorefname{'Equation}%
3386   \def\footnoteautorefname{note}%
3387   \def\itemautorefname{item}%
3388   \def\figureautorefname{Figure}%
3389   \def\tableautorefname{Tableau}%

```

```

3390 \def\partautorefname{Partie}%
3391 \def\appendixautorefname{Appendice}%
3392 \def\chapterautorefname{chapitre}%
3393 \def\sectionautorefname{section}%
3394 \def\subsectionautorefname{sous-section}%
3395 \def\subsubsectionautorefname{sous-sous-section}%
3396 \def\paragraphautorefname{paragraphe}%
3397 \def\subparagraphautorefname{sous-paragraphe}%
3398 \def\FancyVerbLineautorefname{ligne}%
3399 \def\theoremautorefname{Th\'eor\`eme}%
3400 \def\pageautorefname{page}%
3401 }
3402 \def\HyLang@german{%
3403 \def\equationautorefname{Gleichung}%
3404 \def\footnoteautorefname{Fu\ss note}%
3405 \def\itemautorefname{Punkt}%
3406 \def\figureautorefname{Abbildung}%
3407 \def\tableautorefname{Tabelle}%
3408 \def\partautorefname{Teil}%
3409 \def\appendixautorefname{Anhang}%
3410 \def\chapterautorefname{Kapitel}%
3411 \def\sectionautorefname{Abschnitt}%
3412 \def\subsectionautorefname{Unterabschnitt}%
3413 \def\subsubsectionautorefname{Unterunterabschnitt}%
3414 \def\paragraphautorefname{Absatz}%
3415 \def\subparagraphautorefname{Unterabsatz}%
3416 \def\FancyVerbLineautorefname{Zeile}%
3417 \def\theoremautorefname{Theorem}%
3418 \def\pageautorefname{Seite}%
3419 }
3420 \def\HyLang@italian{%
3421 \def\equationautorefname{Equazione}%
3422 \def\footnoteautorefname{nota}%
3423 \def\itemautorefname{punto}%
3424 \def\figureautorefname{Figura}%
3425 \def\tableautorefname{Tabella}%
3426 \def\partautorefname{Parte}%
3427 \def\appendixautorefname{Appendice}%
3428 \def\chapterautorefname{Capitolo}%
3429 \def\sectionautorefname{sezione}%
3430 \def\subsectionautorefname{sottosezione}%
3431 \def\subsubsectionautorefname{sottosottosezione}%
3432 \def\paragraphautorefname{paragrafo}%
3433 \def\subparagraphautorefname{sottoparagrafo}%
3434 \def\FancyVerbLineautorefname{linea}%
3435 \def\theoremautorefname{Teorema}%
3436 \def\pageautorefname{Pag.\@}%
3437 }
3438 \def\HyLang@magyar{%
3439 \def\equationautorefname{Egyenlet}%
3440 \def\footnoteautorefname{l\'abjegyzet}%
3441 \def\itemautorefname{Elem}%
3442 \def\figureautorefname{'Abra}%
3443 \def\tableautorefname{T\'abl\'azat}%
3444 \def\partautorefname{R\'esz}%
3445 \def\appendixautorefname{F\'uggel\'ek}%
3446 \def\chapterautorefname{fejezet}%

```



```

3447 \def\sectionautorefname{szakasz}%
3448 \def\subsectionautorefname{alszakasz}%
3449 \def\subsubsectionautorefname{alalszakasz}%
3450 \def\paragraphautorefname{bekezd'es}%
3451 \def\subparagraphautorefname{albekezd'es}%
3452 \def\FancyVerbLineautorefname{sor}%
3453 \def\theoremautorefname{T'etel}%
3454 \def\pageautorefname{oldal}%
3455 }
3456 \def\HyLang@portuges{%
3457 \def\equationautorefname{Equa\c c\~ao}%
3458 \def\footnoteautorefname{Nota de rodap'e}%
3459 \def\itemautorefname{Item}%
3460 \def\figureautorefname{Figura}%
3461 \def\tableautorefname{Tabela}%
3462 \def\partautorefname{Parte}%
3463 \def\appendixautorefname{Ap\~endice}%
3464 \def\chapterautorefname{Cap'itulo}%
3465 \def\sectionautorefname{Se\c c\~ao}%
3466 \def\subsectionautorefname{Subse\c c\~ao}%
3467 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3468 \def\paragraphautorefname{par'agrafo}%
3469 \def\subparagraphautorefname{subpar'agrafo}%
3470 \def\FancyVerbLineautorefname{linha}%
3471 \def\theoremautorefname{Teorema}%
3472 \def\pageautorefname{P'agina}%
3473 }

```

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`.

```

3474 \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`?

```

3475 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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`.

```

3476 % \def\equationautorefname{%
3477 %   \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3478 % }%

```

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

```

3479 \def\footnoteautorefname{%
3480   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr. \cyrp\cyr\cyri\cyrm.%
3481 }%

```

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

```

3482 % \def\footnoteautorefname{%
3483 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3484 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3485 % }%

```

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

```

3486 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3487 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

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

```

3488 \def\itemautorefname{\cyr\cyrp.}%
3489 % \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.

```

3490 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3491 \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.

```

3492 \def\partautorefname{\cyr\cyrch.}%
3493 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3494 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

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

```

3495 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3496 % \def\appendixautorefname{%
3497 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3498 % }%

```

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.

```

3499 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3500 \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.

```

3501 \def\paragraphautorefname{\cyr\cyrp.}%
3502 \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.

```

3503 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3504 % \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.

```

3505 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```
3506 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3507 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3508 % \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 ...

```
3509 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3510 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3511 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3512 \def\pageautorefname{\cyr\cyrs.}%
3513 }
```

```
3514 \def\HyLang@spanish{%
3515 \def\equationautorefname{Ecuaci\`on}%
3516 \def\footnoteautorefname{Nota a pie de p\`agina}%
3517 \def\itemautorefname{Elemento}%
3518 \def\figureautorefname{Figura}%
3519 \def\tableautorefname{Tabla}%
3520 \def\partautorefname{Parte}%
3521 \def\appendixautorefname{Ap\`endice}%
3522 \def\chapterautorefname{Cap\`itulo}%
3523 \def\sectionautorefname{Secci\`on}%
3524 \def\subsectionautorefname{Subsecci\`on}%
3525 \def\subsubsectionautorefname{Subsubsecci\`on}%
3526 \def\paragraphautorefname{P\`arrafo}%
3527 \def\subparagraphautorefname{Subp\`arrafo}%
3528 \def\FancyVerbLineautorefname{L\`inea}%
3529 \def\theoremautorefname{Teorema}%
3530 \def\pageautorefname{P\`agina}%
3531 }
```

```
3532 \def\HyLang@catalan{%
3533 \def\equationautorefname{Equaci\`o}%
3534 \def\footnoteautorefname{Nota al peu de p\`agina}%
3535 \def\itemautorefname{Element}%
3536 \def\figureautorefname{Figura}%
3537 \def\tableautorefname{Taula}%
3538 \def\partautorefname{Part}%
3539 \def\appendixautorefname{Ap\`endix}%
3540 \def\chapterautorefname{Cap\`itol}%
3541 \def\sectionautorefname{Secci\`o}%
3542 \def\subsectionautorefname{Subsecci\`o}%
3543 \def\subsubsectionautorefname{Subsubsecci\`o}%
3544 \def\paragraphautorefname{Par\`agraf}%
3545 \def\subparagraphautorefname{Subpar\`agraf}%
3546 \def\FancyVerbLineautorefname{L\`inia}%
3547 \def\theoremautorefname{Teorema}%
3548 \def\pageautorefname{P\`agina}%
3549 }
```

```

3550 \def\HyLang@vietnamese{%
3551   \def\equationautorefname{Ph\uhorn{}}\ohorn{}ng tr\`inh}%
3552   \def\footnoteautorefname{Ch\`u th\`ich}%
3553   \def\itemautorefname{m\`d{u}c}%
3554   \def\figureautorefname{H\`inh}%
3555   \def\tableautorefname{B\`h{a}ng}%
3556   \def\partautorefname{Ph\`acircumflex{}n}%
3557   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3558   \def\chapterautorefname{ch\uhorn{}}\ohorn{}ng}%
3559   \def\sectionautorefname{m\`d{u}c}%
3560   \def\subsectionautorefname{m\`d{u}c}%
3561   \def\subsubsectionautorefname{m\`d{u}c}%
3562   \def\paragraphautorefname{dj{o}d{a}n}%
3563   \def\subparagraphautorefname{dj{o}d{a}n}%
3564   \def\FancyVerbLineautorefname{d\`ong}%
3565   \def\theoremautorefname{DJ{}d{i}nh l\`y}%
3566   \def\pageautorefname{Trang}%
3567 }

```

Greek, see github issue 52

```

3568 \def\HyLang@greek{%
3569   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3570   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3571   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3572   \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3573   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3574   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3575   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3576   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3577   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3578   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3579   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\textrho\textalpha\textphi\textomicron\textvarsigma}%
3580   \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3581   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3582   \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3583   \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%
3584   \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\textalpha}%
3585 }
3586 \def\HyLang@dutch{%
3587   \def\equationautorefname{Vergelijking}%
3588   \def\footnoteautorefname{voetnoot}%

```

```

3589 \def\itemautorefname{punt}%
3590 \def\figureautorefname{Figuur}%
3591 \def\tableautorefname{Tabel}%
3592 \def\partautorefname{Deel}%
3593 \def\appendixautorefname{Bijlage}%
3594 \def\chapterautorefname{hoofdstuk}%
3595 \def\sectionautorefname{paragraaf}%
3596 \def\subsectionautorefname{deelparagraaf}%
3597 \def\subsubsectionautorefname{deel-deelparagraaf}%
3598 \def\paragraphautorefname{alinea}%
3599 \def\subparagraphautorefname{deelalinea}%
3600 \def\FancyVerbLineautorefname{regel}%
3601 \def\theoremautorefname{Stelling}%
3602 \def\pageautorefname{pagina}%
3603 }

```

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

```

3604 \def\HyLang@addto#1#2{%
3605   #2%
3606   \@temptokena{#2}%
3607   \ifx#1\relax
3608     \let#1\@empty
3609   \fi
3610   \ifx#1\@undefined
3611     \edef#1{\the\@temptokena}%
3612   \else
3613     \toks@\expandafter{#1}%
3614     \edef#1{\the\toks@\the\@temptokena}%
3615   \fi
3616   \@temptokena{}\toks@\@temptokena
3617 }

3618 \def\HyLang@DeclareLang#1#2#3{%
3619   \@ifpackagewith{babel}{#1}{%
3620     \expandafter\HyLang@addto
3621       \csname extras#1\expandafter\endcsname
3622       \csname HyLang@#2\endcsname
3623     \begingroup
3624       \edef\x{\endgroup
3625         #3%
3626       }%
3627     \x
3628     \@namedef{HyLang@#1@done}{}%
3629   }{}%
3630   \begingroup
3631     \edef\x##1#2{%
3632       \noexpand\ifx##2\relax
3633         \errmessage{No definitions for language #2' found!}%
3634       \noexpand\fi
3635     \endgroup
3636     \noexpand\define@key{Hyp}{#1}[]{%
3637       \noexpand\@ifundefined{HyLang@#1@done}{%
3638         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3639         #3%
3640         \noexpand\@namedef{HyLang@#1@done}{}%
3641       }{}%
3642     }%

```

```

3643 }%
3644 \expandafter\x\csname extras#1\expandafter\endcsname
3645 \csname HyLang@#2\endcsname
3646 }
3647 \HyLang@DeclareLang{english}{english}{}
3648 \HyLang@DeclareLang{UKenglish}{english}{}
3649 \HyLang@DeclareLang{british}{english}{}
3650 \HyLang@DeclareLang{USenglish}{english}{}
3651 \HyLang@DeclareLang{american}{english}{}
3652 \HyLang@DeclareLang{german}{german}{}
3653 \HyLang@DeclareLang{austrian}{german}{}
3654 \HyLang@DeclareLang{ngerman}{german}{}
3655 \HyLang@DeclareLang{naustrian}{german}{}
3656 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3657 \HyLang@DeclareLang{brazil}{portuges}{}
3658 \HyLang@DeclareLang{brazilian}{portuges}{}
3659 \HyLang@DeclareLang{portuguese}{portuges}{}
3660 \HyLang@DeclareLang{spanish}{spanish}{}
3661 \HyLang@DeclareLang{catalan}{catalan}{}
3662 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3663 \HyLang@DeclareLang{french}{french}{}
3664 \HyLang@DeclareLang{frenchb}{french}{}
3665 \HyLang@DeclareLang{français}{french}{}
3666 \HyLang@DeclareLang{acadian}{french}{}
3667 \HyLang@DeclareLang{canadien}{french}{}
3668 \HyLang@DeclareLang{italian}{italian}{}
3669 \HyLang@DeclareLang{magyar}{magyar}{}
3670 \HyLang@DeclareLang{hungarian}{magyar}{}
3671 \HyLang@DeclareLang{greek}{greek}{}
3672 \HyLang@DeclareLang{dutch}{dutch}{}

```

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

```

3673 \DeclareVoidOption{vietnamese}{%
3674 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3675 \Hy@AtEndOfPackage{%
3676 \@ifundefined{T@PU}{}{}%
3677 \input{puvnenc.def}%
3678 }%
3679 }%
3680 }
3681 \DeclareVoidOption{vietnam}{%
3682 \HyLang@addto\extrasvietnam\HyLang@vietnamese
3683 \Hy@AtEndOfPackage{%
3684 \@ifundefined{T@PU}{}{}%
3685 \input{puvnenc.def}%
3686 }%
3687 }%
3688 }

```

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

```

3689 \DeclareVoidOption{arabic}{%
3690 \Hy@AtEndOfPackage{%
3691 \@ifundefined{T@PU}{}{}%
3692 \input{puarenc.def}%
3693 }%
3694 }%
3695 }

```

13 Options to change appearance of links

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

```
3696 \define@key{Hyp}{colorlinks}[true]{%
3697   \Hy@boolkey{colorlinks}{#1}%
3698 }
3699 \DeclareVoidOption{hidelinks}{%
3700   \Hy@colorlinksfalse
3701   \Hy@ocgcolorlinksfalse
3702   \Hy@frenchlinksfalse
3703   \def\Hy@colorlink##1{\begingroup}%
3704   \def\Hy@endcolorlink{\endgroup}%
3705   \def\@pdfborder{0 0 0}%
3706   \let\@pdfborderstyle\ltx@empty
3707 }
3708 \define@key{Hyp}{ocgcolorlinks}[true]{%
3709   \Hy@boolkey{ocgcolorlinks}{#1}%
3710 }
3711 \Hy@AtBeginDocument{%
3712   \begingroup
3713   \@ifundefined{OBJ@OCG@view}{%
3714     \ifHy@ocgcolorlinks
3715       \Hy@Warning{%
3716         Driver does not support `ocgcolorlinks',\MessageBreak
3717         using `colorlinks' instead%
3718       }%
3719     \fi
3720   }{%
3721   }%
3722 }
3723 \define@key{Hyp}{frenchlinks}[true]{%
3724   \Hy@boolkey{frenchlinks}{#1}%
3725 }
```

14 Bookmarking

```
3726 \begingroup\expandafter\expandafter\expandafter\endgroup
3727 \expandafter\ifx\csname chapter\endcsname\relax
3728   \def\toclevel@part{0}%
3729 \else
3730   \def\toclevel@part{-1}%
3731 \fi
3732 \def\toclevel@chapter{0}
3733 \def\toclevel@section{1}
3734 \def\toclevel@subsection{2}
3735 \def\toclevel@subsubsection{3}
3736 \def\toclevel@paragraph{4}
3737 \def\toclevel@subparagraph{5}
3738 \def\toclevel@figure{0}
3739 \def\toclevel@table{0}
3740 \@ifpackageloaded{listings}{%
3741   \providecommand*\theHlstlisting{\thelstlisting}%
3742   \providecommand*\toclevel@lstlisting{0}%
3743 }{}
3744 \@ifpackageloaded{listing}{%
3745   \providecommand*\theHlisting{\thelisting}%
3746 }
```

```

3746 \providecommand*\toclevel@listing{0}%
3747 }{}

```

```

3748 \define@key{Hyp}{bookmarks}[true]{%
3749   \Hy@boolkey{bookmarks}{#1}%
3750 }

```

```

3751 \define@key{Hyp}{bookmarksopen}[true]{%
3752   \Hy@boolkey{bookmarksopen}{#1}%
3753 }

```

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.

```

3754 \let\Hy@bookmarksdepth\c@tocdepth
3755 \define@key{Hyp}{bookmarksdepth}[]{}%
3756 \begingroup
3757   \edef\x{#1}%
3758   \ifx\x\empty
3759     \global\let\Hy@bookmarksdepth\c@tocdepth
3760   \else
3761     \@ifundefined{toclevel@\x}{%
3762       \@onelevel@sanitize\x
3763       \edef\y{\expandafter\@car\x\@nil}%
3764       \ifcase 0\expandafter\ifx\y-1\fi
3765         \expandafter\ifnum\expandafter`\y>47 %
3766         \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3767       \Hy@Warning{Unknown document division name (\x)}%
3768     \else
3769       \setbox\z@=\hbox{%
3770         \count@=\x
3771         \xdef\Hy@bookmarksdepth{\the\count@}%
3772       }%
3773     \fi
3774   }{}%
3775   \setbox\z@=\hbox{%
3776     \count@=\csname toclevel@\x\endcsname
3777     \xdef\Hy@bookmarksdepth{\the\count@}%
3778   }%
3779 }%
3780 \fi
3781 \endgroup
3782 }

```

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

```

3783 \define@key{Hyp}{bookmarksopenlevel}{%
3784   \def\@bookmarksopenlevel{#1}%
3785 }
3786 \def\@bookmarksopenlevel{\maxdimen}
3787 % `bookmarkstype' to specify which `toc' file to mimic
3788 \define@key{Hyp}{bookmarkstype}{%
3789   \def\Hy@bookmarkstype{#1}%

```



```

3790 }
3791 \def\Hy@bookmarkstype{toc}

```

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

```

3792 \define@key{Hyp}{bookmarksnumbered}[true]{%
3793   \Hy@boolkey{bookmarksnumbered}{#1}%
3794 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3795 \define@key{Hyp}{CJKbookmarks}[true]{%
3796   \Hy@boolkey{CJKbookmarks}{#1}%
3797 }

3798 \def\Hy@temp#1{%
3799   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3800 }
3801 \def\Hy@@temp#1#2#3{%
3802   \define@key{Hyp}{#2color}{%
3803     \HyColor@HyperrefColor{##1}#1%
3804   }%
3805   \def#1{#3}%
3806 }
3807 \Hy@temp{link}{red}
3808 \Hy@temp{anchor}{black}
3809 \Hy@temp{cite}{green}
3810 \Hy@temp{file}{cyan}
3811 \Hy@temp{url}{magenta}
3812 \Hy@temp{menu}{red}
3813 \Hy@temp{run}{\@filecolor}
3814 \define@key{Hyp}{pagecolor}{%
3815   \Hy@WarningPageColor
3816 }
3817 \def\Hy@WarningPageColor{%
3818   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3819   \global\let\Hy@WarningPageColor\relax
3820 }
3821 \define@key{Hyp}{allcolors}{%
3822   \HyColor@HyperrefColor{#1}\@linkcolor
3823   \HyColor@HyperrefColor{#1}\@anchorcolor
3824   \HyColor@HyperrefColor{#1}\@citecolor
3825   \HyColor@HyperrefColor{#1}\@filecolor
3826   \HyColor@HyperrefColor{#1}\@urlcolor
3827   \HyColor@HyperrefColor{#1}\@menucolor
3828   \HyColor@HyperrefColor{#1}\@runcolor
3829 }

3830 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3831 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3832 \let\@baseurl\empty
3833 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3834 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3835 \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.

```

3836 \let\@pdfpagetransition\relax
3837 \define@key{Hyp}{pdfpagetransition}{%
3838   \def\@pdfpagetransition{#1}%
3839 }

```

`\@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.

```

3840 \let\@pdfpageduration\relax
3841 \define@key{Hyp}{pdfpageduration}{%
3842   \def\@pdfpageduration{#1}%
3843   \Hy@Match\@pdfpageduration{}{%
3844     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3845   }{%
3846     \Hy@Warning{%
3847       Invalid value '\@pdfpageduration'\MessageBreak
3848       of option 'pdfpageduration'\MessageBreak
3849       is replaced by an empty value%
3850     }%
3851     \let\@pdfpageduration\ltx@empty
3852   }%
3853 }

```

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.

```

3854 \newif\ifHy@useHidKey
3855 \Hy@useHidKeyfalse
3856 \define@key{Hyp}{pdfpagehidden}[true]{%
3857   \Hy@boolkey{pdfpagehidden}{#1}%
3858   \ifHy@pdfpagehidden
3859     \global\Hy@useHidKeytrue
3860   \fi
3861 }

```

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).

```

3862 \def\Hy@ColorList{cite,file,link,menu,run,url}
3863 \@for\Hy@temp:=\Hy@ColorList\do{%
3864   \edef\Hy@temp{%
3865     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3866       \noexpand\HyColor@HyperrefBorderColor
3867       {##1}%
3868       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3869       {hyperref}%
3870       {\Hy@temp bordercolor}%
3871     }%
3872   }%
3873   \Hy@temp

```

```

3874 }
3875 \define@key{Hyp}{pagebordercolor}{%
3876 \Hy@WarningPageBorderColor
3877 }
3878 \def\Hy@WarningPageBorderColor{%
3879 \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3880 \global\let\Hy@WarningPageBorderColor\relax
3881 }
3882 \define@key{Hyp}{allbordercolors}{%
3883 \def\Hy@temp##1##2{%
3884 \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3885 }%
3886 \Hy@temp\@citebordercolor{cite}%
3887 \Hy@temp\@filebordercolor{file}%
3888 \Hy@temp\@linkbordercolor{link}%
3889 \Hy@temp\@menubordercolor{menu}%
3890 \Hy@temp\@runbordercolor{run}%
3891 \Hy@temp\@urlbordercolor{url}%
3892 }

3893 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3894 \Hy@DefNameKey{pdfhighlight}{%
3895 \do{/I}{Invert}%
3896 \do{/N}{None}%
3897 \do{/O}{Outline}%
3898 \do{/P}{Push}%
3899 }
3900 \def\Hy@setpdfhighlight{%
3901 \ifx\@pdfhighlight\@empty
3902 \else
3903 /H\@pdfhighlight
3904 \fi
3905 }
3906 \define@key{Hyp}{pdfborder}{%
3907 \let\Hy@temp\@pdfborder
3908 \def\@pdfborder{#1}%
3909 \Hy@Match\@pdfborder{}{%
3910 ~\HyPat@NonNegativeReal/ %
3911 \HyPat@NonNegativeReal/ %
3912 \HyPat@NonNegativeReal/%
3913 ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%$%
3914 }-}{%
3915 \Hy@Warning{%
3916 Invalid value `\'@pdfborder'\MessageBreak
3917 for option `pdfborder'.\MessageBreak
3918 Option setting is ignored%
3919 }%
3920 \let\@pdfborder\Hy@temp
3921 }%
3922 }
3923 \define@key{Hyp}{pdfborderstyle}{%
3924 \let\Hy@temp\@pdfborderstyle
3925 \def\@pdfborderstyle{#1}%
3926 \Hy@Match\@pdfborderstyle{}{%
3927 ~%
3928 ( */Type */Border%
3929 | */W +\HyPat@NonNegativeReal/%
3930 | */S */[SDBIU]%

```

```

3931 | */D *[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3932 )* *$%
3933 }{}{%
3934 \Hy@Warning{%
3935   Invalid value ` \@pdfborderstyle'\MessageBreak
3936   for option `pdfborderstyle'.\MessageBreak
3937   Option setting is ignored%
3938 }%
3939 \let\@pdfborderstyle\Hy@temp
3940 }%
3941 }
3942 \def\Hy@setpdfborder{%
3943   \ifx\@pdfborder\@empty
3944   \else
3945     /Border[\@pdfborder]%
3946   \fi
3947   \ifx\@pdfborderstyle\@empty
3948   \else
3949     /BS<<\@pdfborderstyle>>%
3950   \fi
3951 }
3952 \Hy@DefNameKey{pdfpagemode}{%
3953   \do{UseNone}{}%
3954   \do{UseOutlines}{}%
3955   \do{UseThumbs}{}%
3956   \do{FullScreen}{}%
3957   \do{UseOC}{PDF 1.5}%
3958   \do{UseAttachments}{PDF 1.6}%
3959 }
3960 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3961   \do{UseNone}{}%
3962   \do{UseOutlines}{}%
3963   \do{UseThumbs}{}%
3964   \do{FullScreen}{}%
3965   \do{UseOC}{PDF 1.5}%
3966   \do{UseAttachments}{PDF 1.6}%
3967 }
3968 \Hy@DefNameKey{pdfdirection}{%
3969   \do{L2R}{Left to right}%
3970   \do{R2L}{Right to left}%
3971 }
3972 \Hy@DefNameKey{pdfviewarea}{%
3973   \do{MediaBox}{}%
3974   \do{CropBox}{}%
3975   \do{BleedBox}{}%
3976   \do{TrimBox}{}%
3977   \do{ArtBox}{}%
3978 }
3979 \Hy@DefNameKey{pdfviewclip}{%
3980   \do{MediaBox}{}%
3981   \do{CropBox}{}%
3982   \do{BleedBox}{}%
3983   \do{TrimBox}{}%
3984   \do{ArtBox}{}%
3985 }
3986 \Hy@DefNameKey{pdfprintarea}{%
3987   \do{MediaBox}{}%

```

```

3988 \do{CropBox}{}%
3989 \do{BleedBox}{}%
3990 \do{TrimBox}{}%
3991 \do{ArtBox}{}%
3992 }
3993 \Hy@DefNameKey{pdfprintclip}{%
3994 \do{MediaBox}{}%
3995 \do{CropBox}{}%
3996 \do{BleedBox}{}%
3997 \do{TrimBox}{}%
3998 \do{ArtBox}{}%
3999 }
4000 \Hy@DefNameKey{pdfprintscaling}{%
4001 \do{AppDefault}{}%
4002 \do{None}{}%
4003 }
4004 \Hy@DefNameKey{pdfduplex}{%
4005 \do{Simplex}{}%
4006 \do{DuplexFlipShortEdge}{}%
4007 \do{DuplexFlipLongEdge}{}%
4008 }
4009 \Hy@DefNameKey{pdfpicktraybypdftype}{%
4010 \do{true}{}%
4011 \do{false}{}%
4012 }
4013 \define@key{Hyp}{pdfprintpagerange}{%
4014 \def\@pdfprintpagerange{#1}%
4015 }
4016 \Hy@DefNameKey{pdfnumcopies}{%
4017 \do{2}{two copies}%
4018 \do{3}{three copies}%
4019 \do{4}{four copies}%
4020 \do{5}{five copies}%
4021 }
4022 \define@key{Hyp}{pdfusetitle}[true]{%
4023 \Hy@boolkey{pdfusetitle}{#1}%
4024 }
4025 \def\HyXeTeX@CheckUnicode{%
4026 \ifxetex
4027 \ifHy@unicode
4028 \else
4029 \Hy@WarningNoLine{%
4030 XeTeX driver only supports unicode.\MessageBreak
4031 Enabling option `unicode'%
4032 }%
4033 \kvsetkeys{Hyp}{unicode}%
4034 \fi
4035 \else
4036 \let\HyXeTeX@CheckUnicode\relax
4037 \fi
4038 }
4039 \def\HyPsd@PrerenderUnicode#1{%
4040 \begingroup
4041 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4042 \else
4043 \sbox0{%
4044 \let\GenericInfo\@gobbles

```

```

4045     \let\GenericWarning\@gobbletwo
4046     \let\GenericError\@gobblefour
4047     \PrerenderUnicode{#1}%
4048 }%
4049 \fi
4050 \endgroup
4051 }
4052 \define@key{Hyp}{pdftitle}{%
4053   \HyXeTeX@CheckUnicode
4054   \HyPsd@XeTeXBigCharstrue
4055   \HyPsd@PrerenderUnicode{#1}%
4056   \pdfstringdef\@pdftitle{#1}%
4057 }
4058 \define@key{Hyp}{pdfauthor}{%
4059   \HyXeTeX@CheckUnicode
4060   \HyPsd@XeTeXBigCharstrue
4061   \HyPsd@PrerenderUnicode{#1}%
4062   \pdfstringdef\@pdfauthor{#1}%
4063 }
4064 \define@key{Hyp}{pdfproducer}{%
4065   \HyXeTeX@CheckUnicode
4066   \HyPsd@XeTeXBigCharstrue
4067   \HyPsd@PrerenderUnicode{#1}%
4068   \pdfstringdef\@pdfproducer{#1}%
4069 }
4070 \define@key{Hyp}{pdfcreator}{%
4071   \HyXeTeX@CheckUnicode
4072   \HyPsd@XeTeXBigCharstrue
4073   \HyPsd@PrerenderUnicode{#1}%
4074   \pdfstringdef\@pdfcreator{#1}%
4075 }
4076 \define@key{Hyp}{addtopdfcreator}{%
4077   \HyXeTeX@CheckUnicode
4078   \HyPsd@XeTeXBigCharstrue
4079   \HyPsd@PrerenderUnicode{#1}%
4080   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4081 }
4082 \define@key{Hyp}{pdfcreationdate}{%
4083   \begingroup
4084     \Hy@unicodfalse
4085     \pdfstringdef\@pdfcreationdate{#1}%
4086   \endgroup
4087 }
4088 \define@key{Hyp}{pdfmoddate}{%
4089   \begingroup
4090     \Hy@unicodfalse
4091     \pdfstringdef\@pdfmoddate{#1}%
4092   \endgroup
4093 }
4094 \define@key{Hyp}{pdfsubject}{%
4095   \HyXeTeX@CheckUnicode
4096   \HyPsd@XeTeXBigCharstrue
4097   \HyPsd@PrerenderUnicode{#1}%
4098   \pdfstringdef\@pdfsubject{#1}%
4099 }
4100 \define@key{Hyp}{pdfkeywords}{%
4101   \HyXeTeX@CheckUnicode

```

```

4102 \HyPsd@XeTeXBigCharstrue
4103 \HyPsd@PrerenderUnicode{#1}%
4104 \pdfstringdef\@pdfkeywords{#1}%
4105 }
4106 \define@key{Hyp}{pdftrapped}{%
4107 \lowercase{\edef\Hy@temp{#1}}%
4108 \ifx\Hy@temp\HyInfo@trapped@true
4109 \def\@pdftrapped{True}%
4110 \else
4111 \ifx\Hy@temp\HyInfo@trapped@false
4112 \def\@pdftrapped{False}%
4113 \else
4114 \ifx\Hy@temp\HyInfo@trapped@unknown
4115 \def\@pdftrapped{Unknown}%
4116 \else
4117 \ifx\Hy@temp\@empty
4118 \else
4119 \Hy@Warning{%
4120     Unsupported value `#1'\MessageBreak
4121     for option `pdftrapped'%
4122 }%
4123 \fi
4124 \def\@pdftrapped{}%
4125 \fi
4126 \fi
4127 \fi
4128 }
4129 \def\HyInfo@trapped@true{true}
4130 \def\HyInfo@trapped@false{false}
4131 \def\HyInfo@trapped@unknown{unknown}
4132 \def\HyInfo@TrappedUnsupported{%
4133 \ifx\@pdftrapped\@empty
4134 \else
4135 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
4136 \gdef\HyInfo@TrappedUnsupported{}}%
4137 \fi
4138 }
4139 \define@key{Hyp}{pdfinfo}{%
4140 \kvsetkeys{pdfinfo}{#1}%
4141 }
4142 \def\Hy@temp#1{%
4143 \lowercase{\Hy@temp@A{#1}}{#1}%
4144 }
4145 \def\Hy@temp@A#1#2{%
4146 \define@key{pdfinfo}{#2}{%
4147 \hypersetup{pdf#1={#1}}}%
4148 }%
4149 }
4150 \Hy@temp{Title}
4151 \Hy@temp{Author}
4152 \Hy@temp{Keywords}
4153 \Hy@temp{Subject}
4154 \Hy@temp{Creator}
4155 \Hy@temp{Producer}
4156 \Hy@temp{CreationDate}
4157 \Hy@temp{ModDate}
4158 \Hy@temp{Trapped}

```

```

4159 \newif\ifHyInfo@AddonUnsupported
4160 \kv@set@family@handler{pdfinfo}{%
4161   \HyInfo@AddonHandler{#1}{#2}%
4162 }
4163 \let\HyInfo@do\relax
4164 \def\HyInfo@AddonHandler#1#2{%
4165   \ifx\kv@value\relax
4166     \Hy@Warning{%
4167       Option `pdfinfo': ignoring key `\'kv@key' without value%
4168     }%
4169   \else
4170     \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
4171     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4172     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4173       \ifHyInfo@AddonUnsupported
4174         \Hy@Warning{%
4175           This driver does not support additional\MessageBreak
4176           information entries, therefore\MessageBreak
4177           `\'kv@key' is ignored%
4178         }%
4179       \else
4180         \def\HyInfo@tmp##1{%
4181           \kv@define@key{pdfinfo}{##1}{%
4182             \HyXeTeX@CheckUnicode
4183             \HyPsd@XeTeXBigCharstrue
4184             \HyPsd@PrerenderUnicode{####1}%
4185             \pdfstringdef\HyInfo@Value{####1}%
4186             \global\expandafter
4187             \let\csname HyInfo@Value@##1\endcsname
4188               \HyInfo@Value
4189           }%
4190         }%
4191         \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4192         \global\expandafter
4193         \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4194           \csname KV@pdfinfo@\HyInfo@Key\endcsname
4195         \xdef\HyInfo@AddonList{%
4196           \HyInfo@AddonList
4197           \HyInfo@do{\HyInfo@Key}%
4198         }%
4199         \kv@parse@normalized{%
4200           \HyInfo@Key={#2}%
4201         }{%
4202           \kv@processor@default{pdfinfo}%
4203         }%
4204       \fi
4205     \else
4206       \kv@parse@normalized{%
4207         \HyInfo@Key={#2}%
4208       }{%
4209         \kv@processor@default{pdfinfo}%
4210       }%
4211     \fi
4212   \fi
4213 }
4214 \def\HyInfo@GenerateAddons{%
4215   \ifHyInfo@AddonUnsupported

```



```

4216 \def\HyInfo@Addons{}%
4217 \else
4218 \begingroup
4219 \toks@{}%
4220 \def\HyInfo@do##1{%
4221 \EdefEscapeName\HyInfo@Key{##1}%
4222 \edef\x{%
4223 \toks@{%
4224 \the\toks@
4225 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4226 }%
4227 }%
4228 \x
4229 }%
4230 \HyInfo@AddonList
4231 \edef\x{\endgroup
4232 \def\noexpand\HyInfo@Addons{\the\toks@}%
4233 }%
4234 \x
4235 \fi
4236 }
4237 \global\let\HyInfo@AddonList\ltx@empty

4238 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4239 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4240 \let\setpdfinkmargin\gobble
4241 \def\calculate@pdfview#1 #2\{\%
4242 \def\@pdfview{#1}%
4243 \ifx\#2\%
4244 \def\@pdfviewparams{-32768}%
4245 \else
4246 \def\@pdfviewparams{ #2}%
4247 \fi
4248 }
4249 \begingroup\expandafter\expandafter\expandafter\endgroup
4250 \expandafter\ifx\csname numexpr\endcsname\relax
4251 \def\Hy@number#1{%
4252 \expandafter\@firstofone\expandafter{\number#1}%
4253 }%
4254 \else
4255 \def\Hy@number#1{%
4256 \the\numexpr#1\relax
4257 }%
4258 \fi
4259 \define@key{Hyp}{pdfstartpage}{\%
4260 \ifx\#1\%
4261 \let\@pdfstartpage\ltx@empty
4262 \else
4263 \edef\@pdfstartpage{\Hy@number{#1}}%
4264 \fi
4265 }%
4266 \define@key{Hyp}{pdfstartview}{\%
4267 \ifx\#1\%
4268 \let\@pdfstartview\ltx@empty
4269 \else
4270 \hypercalcbpdef\@pdfstartview{/#1}%
4271 \fi
4272 }

```

```

4273 \def\HyPat@NonNegativeReal/{%
4274 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4275 }
4276 \define@key{Hyp}{pdfremotestartview}{%
4277 \ifx\#1\%
4278 \def\@pdfremotestartview{/Fit}%
4279 \else
4280 \hypercalcbpdef\@pdfremotestartview{#1}%
4281 \edef\@pdfremotestartview{\@pdfremotestartview}%
4282 \Hy@Match\@pdfremotestartview{%
4283 ^XYZ(%
4284 )| %
4285 (null|-\HyPat@NonNegativeReal/) %
4286 (null|-\HyPat@NonNegativeReal/) %
4287 (null|\HyPat@NonNegativeReal/)%
4288 )| % end of "XYZ"
4289 Fit(%
4290 )| %
4291 B| %
4292 (H|V|BH|BV)(%
4293 )| %
4294 (null|\HyPat@NonNegativeReal/)%
4295 )| %
4296 R %
4297 \HyPat@NonNegativeReal/ %
4298 \HyPat@NonNegativeReal/ %
4299 \HyPat@NonNegativeReal/ %
4300 \HyPat@NonNegativeReal/%
4301 ) % end of "Fit"
4302 )$%
4303 }-}%
4304 \Hy@Warning{%
4305 Invalid value \@pdfremotestartview'\MessageBreak
4306 of `pdfremotestartview'\MessageBreak
4307 is replaced by `Fit'%
4308 }%
4309 \let\@pdfremotestartview\@empty
4310 }%
4311 \ifx\@pdfremotestartview\@empty
4312 \def\@pdfremotestartview{/Fit}%
4313 \else
4314 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4315 \fi
4316 \fi
4317 }
4318 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4319 \define@key{Hyp}{pdftoolbar}[true]{%
4320 \Hy@boolkey{pdftoolbar}{#1}%
4321 }
4322 \define@key{Hyp}{pdfmenubar}[true]{%
4323 \Hy@boolkey{pdfmenubar}{#1}%
4324 }
4325 \define@key{Hyp}{pdfwindowui}[true]{%
4326 \Hy@boolkey{pdfwindowui}{#1}%
4327 }
4328 \define@key{Hyp}{pdffitwindow}[true]{%
4329 \Hy@boolkey{pdffitwindow}{#1}%

```

```

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

```

Test according to ABNF of RFC 3066.

```

4373   \Hy@Match\@pdflang{icase}{%
4374     ~%
4375     [a-z]{1,8}%
4376     (-[a-z0-9]{1,8})*%
4377     $%
4378   }{%

```

Test according to ABNF of RFC 5646.

```

4379   \Hy@Match\@pdflang{icase}{%
4380     ~%
4381     (%
4382     % langtag
4383     (% language

```

```

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

```

Test for unique extensions.

```

4409    \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4410    \Hy@Match\@pdflang{icase}{~x-}{~}{%
4411    % remove privateuse
4412    \edef\Hy@temp{-\@pdflang}%
4413    \Hy@Match\Hy@temp{icase}{~}{%
4414    ~%
4415    (%
4416    (-[a-wyz0-9]|-[a-z0-9]{2,8})%
4417    )%
4418    -x-%
4419    }{%
4420    \edef\Hy@temp{%
4421    \expandafter\strip@prefix\pdfastmatch1%
4422    }%
4423    }{}%
4424    \Hy@Match\Hy@temp{icase}{~}{%
4425    (-[a-wyz0-9]-).*\ltx@backslashchar1%
4426    }{%
4427    \Hy@Warning{%
4428    Invalid language identifier `#1'\MessageBreak
4429    for option `pdfang', because it violates\MessageBreak
4430    well-formedness defined in RFC 4646\MessageBreak
4431    by duplicate singleton subtags%
4432    }%
4433    \let\@pdfang\relax
4434    }{}%
4435    }%
4436    }{}%

```

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

```

4437    \ifx\@pdfang\relax

```

```

4438 \else
4439 \Hy@Match\@pdflang{icase}{%
4440 ~%
4441 [a-zA-Z]{2}-%
4442 (%
4443 aa|AA|%
4444 [qQ][m-zA-Z]|%
4445 [xX][a-zA-Z]|%
4446 zz|ZZ%
4447 )%
4448 (-|$)%
4449 }{%
4450 \Hy@Warning{%
4451 Invalid language identifier `#1'\MessageBreak
4452 for option `pdflang' because of invalid country code%
4453 \MessageBreak
4454 in second subtag (RFC 3066)%
4455 }%
4456 \let\@pdflang\relax
4457 }{%}%
4458 \fi
4459 }{%
4460 \Hy@Warning{%
4461 Invalid language identifier `#1'\MessageBreak
4462 for option `pdflang', because it violates\MessageBreak
4463 well-formedness defined in RFC 5646%
4464 }%
4465 \let\@pdflang\relax
4466 }%
4467 }{%
4468 \Hy@Warning{%
4469 Invalid language identifier `#1'\MessageBreak
4470 for option `pdflang' (RFC 3066)%
4471 }%
4472 \let\@pdflang\relax
4473 }%
4474 \fi
4475 \fi
4476 }
4477 \define@key{Hyp}{pdfpagelabels}[true]{%
4478 \Hy@boolkey{pdfpagelabels}{#1}%
4479 }
4480 \define@key{Hyp}{pdfescapeform}[true]{%
4481 \Hy@boolkey{pdfescapeform}{#1}%
4482 }

```

Default values:

```

4483 \def\@linkbordercolor{1 0 0}
4484 \def\@urlbordercolor{0 1 1}
4485 \def\@menubordercolor{1 0 0}
4486 \def\@filebordercolor{0 .5 .5}
4487 \def\@runbordercolor{0 .7 .7}
4488 \def\@citebordercolor{0 1 0}
4489 \def\@pdfhighlight{/I}
4490 \let\@pdftitle\ltx@empty
4491 \let\@pdfauthor\ltx@empty
4492 \let\@pdfproducer\relax
4493 \def\@pdfcreator{LaTeX with hyperref}

```

```

4494 \let\@pdfcreationdate\ltx@empty
4495 \let\@pdfmoddate\ltx@empty
4496 \let\@pdfsubject\ltx@empty
4497 \let\@pdfkeywords\ltx@empty
4498 \let\@pdftrapped\ltx@empty
4499 \let\@pdfpagescrop\ltx@empty
4500 \def\@pdfstartview{/Fit}
4501 \def\@pdfremotestartview{/Fit}
4502 \def\@pdfstartpage{1}
4503 \let\@pdfprintpagerange\ltx@empty
4504 \let\@pdflang\relax
4505 \let\PDF@SetupDoc\@empty
4506 \let\PDF@FinishDoc\@empty
4507 \let\phantomsection\@empty
4508 \let\special@paper\@empty
4509 \def\HyperDestNameFilter#1{#1}
4510 \Hy@AtBeginDocument{%
4511   \begingroup
4512     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4513     \dimen@=\x\relax
4514     \ifdim\dimen@>\z@
4515       \else
4516         \dimen@=11in\relax
4517         \Hy@WarningNoLine{%
4518           Height of page (\expandafter\string\x) %
4519           is invalid (\the\x),\MessageBreak
4520           using 11in%
4521         }%
4522       \fi
4523       \dimen@=0.99626401\dimen@
4524       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4525     \endgroup
4526 }
4527 \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.

```

4528 \let\hyper@normalise\ExecuteOptions
4529 \let\ExecuteOptions\hypersetup
4530 \Hy@RestoreCatcodes
4531 \InputIfFileExists{hyperref.cfg}{-}{-}
4532 \Hy@SetCatcodes
4533 \let\ExecuteOptions\hyper@normalise
4534 \ifx\Hy@MaybeStopNow\relax
4535 \else
4536   \Hy@stoppedearlytrue
4537   \expandafter\Hy@MaybeStopNow
4538 \fi
4539 \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.

```

4540 \SetupKeyvalOptions{family=Hyp}
4541 \DeclareLocalOptions{%
4542   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4543 }

```

Add option tex4ht if package tex4ht is loaded.

```

4544 \@ifpackagewith{hyperref}{tex4ht}{%
4545 }{%
4546   \@ifpackageloaded{tex4ht}{%
4547     \PassOptionsToPackage{tex4ht}{hyperref}%
4548   }{%
4549     \ltx@ifundefined{HCode}{%
4550     }{%
4551       \begingroup
4552       \def\Hy@pkg{tex4ht}%
4553       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4554         \def\Hy@param{#2#3}%
4555         \ifx\Hy@param\ltx@empty
4556           \expandafter\ltx@gobble
4557         \else
4558           \def\Hy@param{#3}%
4559           \ifx\Hy@param\Hy@pkg
4560             \PassOptionsToPackage{#2}{tex4ht}%
4561             \expandafter\expandafter\expandafter\@gobble
4562           \else
4563             \expandafter\expandafter\expandafter\ltx@firstofone
4564           \fi
4565         \fi
4566         {\Hy@temp@A#4\Hy@NIL}%
4567       }%
4568       \expandafter
4569       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4570     \endgroup
4571     \PassOptionsToPackage{tex4ht}{hyperref}%
4572   }%
4573 }%
4574 }

4575 \let\ReadBookmarks\relax
4576 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4577 \def\Hy@xspace@end{%
4578 \ltx@ifundefined{xspaceaddexceptions}{%
4579   \Hy@AtBeginDocument{%
4580     \ltx@ifundefined{xspaceaddexceptions}{%
4581     }{%
4582       \def\Hy@xspace@end{%
4583         \ltx@gobble{end for xspace}%
4584       }%
4585       \xspaceaddexceptions{%
4586         \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4587       }%
4588     }%
4589   }%
4590 }{%
4591   \def\Hy@xspace@end{%
4592     \ltx@gobble{end for xspace}%
4593   }%
4594   \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%

```

4595 }

15.2 Option draft

```
4596 \Hy@AtBeginDocument{%
4597   \ifHy@draft
4598     \let\hyper@@anchor\@gobble
4599     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4600     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4601     \def\hyper@anchorend{\Hy@xspace@end}%
4602     \let\hyper@linkstart\@gobbletwo
4603     \def\hyper@linkend{\Hy@xspace@end}%
4604     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4605     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4606     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4607     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4608     \let\PDF@SetupDoc\@empty
4609     \let\PDF@FinishDoc\@empty
4610     \let\@fifthoffive\@secondoftwo
4611     \let\@secondoffive\@secondoftwo
4612     \let\ReadBookmarks\relax
4613     \let\WriteBookmarks\relax
4614     \Hy@WarningNoLine{Draft mode on}%
4615   \fi
4616   \Hy@DisableOption{draft}%
4617   \Hy@DisableOption{nolinks}%
4618   \Hy@DisableOption{final}%
4619 }
```

15.3 PDF/A

```
4620 \Hy@DisableOption{pdfa}
4621 \ifHy@pdfa
4622   \ifnum \Hy@pdfversion < 4
4623     \kvsetkeys{Hyp}{pdfversion=1.4}%
4624   \fi
4625   \Hy@DisableOption{pdfversion}%
4626   \def\Hy@Acrobatmenu#1#2{%
4627     \leavevmode
4628     \begingroup
4629       \edef\x{#1}%
4630       \@onelevel@sanitize\x
4631       \ifx\x\Hy@NextPage
4632         \let\y=Y%
4633       \else
4634         \ifx\x\Hy@PrevPage
4635           \let\y=Y%
4636         \else
4637           \ifx\x\Hy@FirstPage
4638             \let\y=Y%
4639           \else
4640             \ifx\x\Hy@LastPage
4641               \let\y=Y%
4642             \else
4643               \let\y=N%
4644             \fi
4645           \fi
4646         \fi
4647       \fi
```



```

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

```

4669 \Hy@nextfalse
4670 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4671 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4672 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4673 \ifHy@next
4674 \let\texttilde\~%
4675 \fi

4676 \def\Hy@wrapper@babel#1#2{%
4677 \begingroup
4678 \Hy@safe@activetrue
4679 \set@display@protect
4680 \edef\x{#2}%
4681 \@onelevel@sanitize\x
4682 \toks@{#1}%
4683 \edef\x{\endgroup\the\toks@\x}}%
4684 \x
4685 }

4686 \def\Hy@WrapperDef#1{%
4687 \begingroup
4688 \escapechar=\m@ne
4689 \xdef\Hy@gtemp{%
4690 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4691 }%
4692 \endgroup
4693 \edef#1{%
4694 \noexpand\Hy@wrapper@babel
4695 \expandafter\noexpand\Hy@gtemp
4696 }%
4697 \expandafter\def\Hy@gtemp
4698 }

```

```

4699 \ifHy@hyperfigures
4700   \Hy@Info{Hyper figures ON}%
4701 \else
4702   \Hy@Info{Hyper figures OFF}%
4703 \fi
4704 \ifHy@nesting
4705   \Hy@Info{Link nesting ON}%
4706 \else
4707   \Hy@Info{Link nesting OFF}%
4708 \fi
4709 \ifHy@hyperindex
4710   \Hy@Info{Hyper index ON}%
4711 \else
4712   \Hy@Info{Hyper index OFF}%
4713 \fi
4714 \ifHy@plainpages
4715   \Hy@Info{Plain pages ON}%
4716 \else
4717   \Hy@Info{Plain pages OFF}%
4718 \fi
4719 \ifHy@backref
4720   \Hy@Info{Backreferencing ON}%
4721 \else
4722   \Hy@Info{Backreferencing OFF}%
4723 \fi
4724 \ifHy@typexml
4725   \Hy@AtEndOfPackage{%
4726     \RequirePackage{color}%
4727     \RequirePackage{nameref}[2012/07/28]%
4728   }%
4729 \fi
4730 \Hy@DisableOption{typexml}
4731 \ifHy@implicit
4732   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4733 \else
4734   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4735   \def\MaybeStopEarly{%
4736     \Hy@Message{Stopped early}%
4737     \Hy@AtBeginDocument{%
4738       \PDF@FinishDoc
4739       \gdef\PDF@FinishDoc{}}%
4740   }%
4741   \endinput
4742 }%
4743 \Hy@AtBeginDocument{%
4744   \let\autoref\ref
4745   \let\autopageref\pageref
4746   \ifx\@pdfpagemode\@empty
4747     \gdef\@pdfpagemode{UseNone}%
4748   \fi
4749   \global\Hy@backreffalse
4750 }%
4751 \Hy@AtEndOfPackage{%
4752   \global\let\ReadBookmarks\relax
4753   \global\let\WriteBookmarks\relax
4754 }%
4755 \fi

```

```
4756 \Hy@DisableOption{implicit}
```

15.4.1 Driver loading

```
4757 \Hy@AtEndOfPackage{%
4758   \ifpackageloaded{tex4ht}{%
4759     \def\Hy@driver{htex4ht}%
4760     \Hy@texhttrue
4761   }%}
```

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.

```
4762 \ifx\Hy@driver\@empty
4763 \else
4764   \ifx\pdfextension\@undefined
4765     \def\Hy@temp{hpdftex}%
4766   \else
4767     \def\Hy@temp{hluatex}%
4768   \fi
4769 \ifpdf
4770   \ifx\Hy@driver\Hy@temp
4771   \else
4772     \Hy@WarningNoLine{%
4773       Wrong driver ``\Hy@driver.def';\MessageBreak
4774       pdfTeX is running in PDF mode.\MessageBreak
4775       Forcing driver ``\Hy@temp.def'%
4776     }%
4777     \let\Hy@driver\Hy@temp
4778   \fi
4779 \else
4780   \ifx\Hy@driver\Hy@temp
4781     \Hy@WarningNoLine{%
4782       Wrong driver ``\Hy@driver.def';\MessageBreak
4783       pdfTeX is not running in PDF mode.\MessageBreak
4784       Using default driver%
4785     }%
4786     \let\Hy@driver\@empty
4787   \fi
4788 \fi
4789 \ifHy@texht
4790 \else
4791   \ifx\Hy@driver\@empty
4792   \else
4793     \def\Hy@temp{hxetex}%
4794   \ifxetex
4795     \ifx\Hy@driver\Hy@temp
4796     \else
4797       \Hy@WarningNoLine{%
4798         Wrong driver ``\Hy@driver.def';\MessageBreak
4799         XeTeX is running.\MessageBreak
4800         Forcing driver ``\Hy@temp.def' for XeTeX%
4801       }%
4802       \let\Hy@driver\Hy@temp
4803     \fi
4804   \fi
4805 \fi
4806 \fi
4807 \fi
```

```

4808 \ifx\Hy@driver\@empty
4809 \else
4810 \def\Hy@temp{hvtexhtm}%
4811 \ifvtex
4812 \ifnum\OpMode=10 %
4813 \ifx\Hy@driver\Hy@temp
4814 \else
4815 \Hy@WarningNoLine{%
4816 Wrong driver ``\Hy@driver.def';\MessageBreak
4817 VTeX is running in HTML mode.\MessageBreak
4818 Forcing driver ``\Hy@temp.def'%
4819 }%
4820 \let\Hy@driver\Hy@temp
4821 \fi
4822 \else
4823 \ifx\Hy@driver\Hy@temp
4824 \Hy@WarningNoLine{%
4825 Wrong driver ``\Hy@driver.def';\MessageBreak
4826 VTeX is not running in HTML mode.\MessageBreak
4827 Using default driver%
4828 }%
4829 \let\Hy@driver\@empty
4830 \fi
4831 \fi
4832 \fi
4833 \fi

```

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

```

4834 \let\HyOpt@DriverType\ltx@empty
4835 \ifx\HyOpt@CustomDriver\ltx@empty
4836 \ifx\Hy@driver\@empty
4837 \def\HyOpt@DriverType{ (autodetected)}%
4838 \providecommand*{\Hy@defaultdriver}{hypertex}%
4839 \ifpdf
4840 \ifx\pdfextension\@undefined
4841 \def\Hy@driver{hpdfTeX}%
4842 \else
4843 \def\Hy@driver{hluatex}%
4844 \fi
4845 \else
4846 \ifxetex
4847 \def\Hy@driver{hxetex}%
4848 \else
4849 \ifnum\OpMode=10 %
4850 \def\Hy@driver{hvtexhtm}%
4851 \def\MaybeStopEarly{%
4852 \Hy@Message{Stopped early}%
4853 \Hy@AtBeginDocument{%
4854 \PDF@FinishDoc
4855 \gdef\PDF@FinishDoc{}}%
4856 }%
4857 \endinput
4858 }%
4859 \else
4860 \ifnum\OpMode=\@ne
4861 \def\Hy@driver{hvtex}%
4862 \else
4863 \ifnum\OpMode=\tw@

```

```

4864         \def\Hy@driver{hvtex}%
4865     \else
4866         \ifx\HyOpt@DriverFallback\ltx@empty
4867             \let\Hy@driver\Hy@defaultdriver
4868             \def\HyOpt@DriverType{ (default)}%
4869         \else
4870             \begingroup
4871             \toks@{\expandafter{\HyOpt@DriverFallback}}%
4872             \edef\x{\endgroup
4873                 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4874             }%
4875             \x
4876             \ifx\Hy@driver\ltx@empty
4877                 \let\Hy@driver\Hy@defaultdriver
4878                 \def\HyOpt@DriverType{ (default)}%
4879             \else
4880                 \def\HyOpt@DriverType{ (fallback)}%
4881             \fi
4882         \fi
4883     \fi
4884 \fi
4885 \fi
4886 \fi
4887 \fi
4888 \ifx\Hy@driver\Hy@defaultdriver
4889     \def\Hy@temp{hdvwind}%
4890     \ifx\Hy@temp\Hy@driver
4891         \kvsetkeys{Hyp}{colorlinks}%
4892         \PassOptionsToPackage{dviwindo}{color}%
4893     \fi
4894 \fi
4895 \fi
4896 \else
4897     \def\HyOpt@DriverType{ (custom)}%
4898     \let\Hy@driver\HyOpt@CustomDriver
4899 \fi
4900 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4901 \chardef\Hy@VersionChecked=0 %
4902 \input{\Hy@driver.def}%
4903 \ifcase\Hy@VersionChecked
4904     \Hy@VersionCheck{\Hy@driver.def}%
4905 \fi
4906 \let\@unprocessedoptions\relax
4907 \Hy@RestoreCatcodes
4908 \Hy@DisableOption{tex4ht}%
4909 \Hy@DisableOption{pdftex}%
4910 \Hy@DisableOption{nativepdf}%
4911 \Hy@DisableOption{dvipdfm}%
4912 \Hy@DisableOption{dvipdfmx}%
4913 \Hy@DisableOption{dvipdfmx-outline-open}%
4914 \Hy@DisableOption{pdfmark}%
4915 \Hy@DisableOption{dvips}%
4916 \Hy@DisableOption{hypertex}%
4917 \Hy@DisableOption{vtex}%
4918 \Hy@DisableOption{vtexpdfmark}%
4919 \Hy@DisableOption{dviwindo}%
4920 \Hy@DisableOption{dvipsone}%

```

```

4921 \Hy@DisableOption{textures}%
4922 \Hy@DisableOption{latex2html}%
4923 \Hy@DisableOption{ps2pdf}%
4924 \Hy@DisableOption{xetex}%
4925 \Hy@DisableOption{driverfallback}%
4926 \Hy@DisableOption{customdriver}%
4927 \Hy@DisableOption{pdfversion}%
4928 }

```

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.

```

4929 \newif\ifHy@DvipdfmxOutlineOpen
4930 \ifxetex
4931 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4932 \else
4933 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4934 \Hy@DvipdfmxOutlineOpenttrue
4935 \fi
4936 \fi
4937 \begingroup\expandafter\expandafter\expandafter\endgroup
4938 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4939 \else
4940 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4941 \Hy@DvipdfmxOutlineOpenttrue
4942 \fi
4943 \fi

```

15.4.2 Bookmarks

```

4944 \def\WriteBookmarks{0}
4945 \def\@bookmarkopenstatus#1{%
4946 \ifHy@bookmarksopen

```

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

```

4947 \ifnum#1<\expandafter\@firstofone\expandafter
4948 {\number\@bookmarkopenlevel} % explicit space
4949 \else
4950 -%
4951 \fi
4952 \else
4953 -%
4954 \fi
4955 }
4956 \ifHy@bookmarks
4957 \Hy@Info{Bookmarks ON}%
4958 \ifx\@pdfpagemode\@empty
4959 \def\@pdfpagemode{UseOutlines}%
4960 \fi
4961 \else
4962 \let\@bookmarkopenstatus\ltx@gobble
4963 \Hy@Info{Bookmarks OFF}%
4964 \Hy@AtEndOfPackage{%
4965 \global\let\ReadBookmarks\relax
4966 \global\let\WriteBookmarks\relax
4967 }%
4968 \ifx\@pdfpagemode\@empty
4969 \def\@pdfpagemode{UseNone}%

```

```

4970 \fi
4971 \fi
4972 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4973 \def\Hy@CatcodeWrapper#1{%
4974 \let\Hy@endWrap\ltx@empty
4975 \def\TMP@EnsureCode##1##2{%
4976 \edef\Hy@endWrap{%
4977 \Hy@endWrap
4978 \catcode##1 \the\catcode##1\relax
4979 }%
4980 \catcode##1 ##2\relax
4981 }%
4982 \TMP@EnsureCode{10}{12}% ^^J
4983 \TMP@EnsureCode{33}{12}% !
4984 \TMP@EnsureCode{34}{12}% "
4985 \TMP@EnsureCode{36}{3}% $(math)
4986 \TMP@EnsureCode{38}{4}% & (alignment)
4987 \TMP@EnsureCode{39}{12}% '
4988 \TMP@EnsureCode{40}{12}% (
4989 \TMP@EnsureCode{41}{12}% )
4990 \TMP@EnsureCode{42}{12}% *
4991 \TMP@EnsureCode{43}{12}% +
4992 \TMP@EnsureCode{44}{12}% ,
4993 \TMP@EnsureCode{45}{12}% -
4994 \TMP@EnsureCode{46}{12}% .
4995 \TMP@EnsureCode{47}{12}% /
4996 \TMP@EnsureCode{58}{12}% :
4997 \TMP@EnsureCode{59}{12}% ;
4998 \TMP@EnsureCode{60}{12}% <
4999 \TMP@EnsureCode{61}{12}% =
5000 \TMP@EnsureCode{62}{12}% >
5001 \TMP@EnsureCode{63}{12}% ?
5002 \TMP@EnsureCode{91}{12}% [
5003 \TMP@EnsureCode{93}{12}% ]
5004 \TMP@EnsureCode{94}{7}% ^ (superscript)
5005 \TMP@EnsureCode{95}{8}% _ (subscript)
5006 \TMP@EnsureCode{96}{12}% `
5007 \TMP@EnsureCode{124}{12}% |
5008 \TMP@EnsureCode{126}{13}% ~ (active)
5009 ##1\relax
5010 \Hy@endWrap
5011 }

```

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

```

5012 \Hy@AtBeginDocument{%
5013 \ifHy@ocgcolorlinks
5014 \kvsetkeys{Hyp}{colorlinks}%
5015 \ifHy@pdfa
5016 \Hy@Warning{%
5017 PDF/A: Optional Content Groups are prohibited,\MessageBreak
5018 using `colorlinks' instead of `ocgcolorlinks'%
5019 }%
5020 \Hy@ocgcolorlinksfalse
5021 \fi
5022 \fi
5023 \ifHy@ocgcolorlinks

```

```

5024 \else
5025   \Hy@DisableOption{ocgcolorlinks}%
5026 \fi
5027 \ifHy@colorlinks
5028   \def\@pdfborder{0 0 0}%
5029   \let\@pdfborderstyle\@empty
5030   \ifHy@typexml
5031     \else
5032       \Hy@CatcodeWrapper{%
5033         \RequirePackage{color}%
5034       }%
5035     \fi
5036     \def\Hy@colorlink#1{%
5037       \begingroup
5038         \HyColor@UseColor#1%
5039       }%
5040     \def\Hy@endcolorlink{\endgroup}%
5041     \Hy@Info{Link coloring ON}%
5042   \else
5043     \ifHy@frenchlinks
5044       \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5045       \def\Hy@endcolorlink{\endgroup}%
5046       \Hy@Info{French linking ON}%
5047     \else
for grouping consistency:
5048       \def\Hy@colorlink#1{\begingroup}%
5049       \def\Hy@endcolorlink{\endgroup}%
5050       \Hy@Info{Link coloring OFF}%
5051     \fi
5052   \fi
5053   \Hy@DisableOption{colorlinks}%
5054   \Hy@DisableOption{frenchlinks}%
5055   \ifHy@texht
5056     \long\def\@firstoffive#1#2#3#4#5{#1}%
5057     \long\def\@secondoffive#1#2#3#4#5{#2}%
5058     \long\def\@thirdoffive#1#2#3#4#5{#3}%
5059     \long\def\@fourthoffive#1#2#3#4#5{#4}%
5060     \long\def\@fifthoffive#1#2#3#4#5{#5}%
5061     \providecommand*\@safe@activetrue{}%
5062     \providecommand*\@safe@activesfalse{}%
5063     \def\T@ref#1{%
5064       \Hy@safe@activetrue
5065       \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5066       \Hy@safe@activesfalse
5067     }%
5068     \def\T@pageref#1{%
5069       \Hy@safe@activetrue
5070       \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5071       \Hy@safe@activesfalse
5072     }%
5073   \else
5074     \ifHy@typexml
5075     \else
5076       \Hy@CatcodeWrapper{%
5077         \RequirePackage{nameref}[2012/07/28]%
5078       }%
5079     \fi

```



```

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

```

5122 \begingroup
5123   \endlinechar=-1 %
5124   \catcode`\^^A=14 %
5125   \catcode`\^^M\active

```

```

5126 \catcode`\%\active
5127 \catcode`\#\active
5128 \catcode`\_\active
5129 \catcode`\$\active
5130 \catcode`\&\active
5131 \gdef\hyper@normalise{^^A
5132   \begingroup
5133   \catcode`\^^M\active
5134   \def^^M{ }^^A
5135   \catcode`\%\active
5136   \let%\@percentchar
5137   \let%\@percentchar
5138   \catcode`\#\active
5139   \def#{\hyper@hash}^^A
5140   \def\#{\hyper@hash}^^A
5141   \@makeother\&^^A
5142   \edef&{\string&}^^A
5143   \edef\&{\string&}^^A
5144   \edef\textunderscore{\string_}^^A
5145   \let\_ \textunderscore
5146   \catcode`\_\active
5147   \let\_ \textunderscore
5148   \let~\hyper@tilde
5149   \let\~\hyper@tilde
5150   \let\textasciitilde\hyper@tilde
5151   \let\\\@backslashchar
5152   \edef${\string$}^^A
5153   \Hy@safe@activetrue
5154   \hyper@n@rmalise
5155 }^^A
5156 \catcode`\#=6 ^^A
5157 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5158 \gdef\hyper@n@rmalise#1#2{^^A
5159   \def\Hy@tempa{#2}^^A
5160   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5161     \ltx@ReturnAfterElseFi{^^A
5162       \hyper@@normalise{#1}^^A
5163     }^^A
5164   \else
5165     \ltx@ReturnAfterFi{^^A
5166       \hyper@@normalise{#1}{#2}^^A
5167     }^^A
5168   \fi
5169 }^^A
5170 \gdef\hyper@@normalise#1#2{^^A
5171   \edef\Hy@tempa{^^A
5172     \endgroup
5173     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
5174   }^^A
5175   \Hy@tempa
5176 }^^A
5177 \gdef\Hy@RemovePercentCr#1%\^^M#2\@nil{^^A
5178   #1^^A
5179   \ifx\limits#2\limits
5180   \else
5181     \ltx@ReturnAfterFi{^^A
5182       \Hy@RemovePercentCr #2\@nil

```

```

5183     }^^A
5184     \fi
5185 }^^A
5186 \endgroup
5187 \providecommand*\hyper@chars{%
5188   \let\#\hyper@hash
5189   \let\%\@percentchar
5190   \Hy@safe@activetrue
5191 }

5192 \def\hyperlink#1#2{%
5193   \hyper@@link{}\{#1\}\{#2\}%
5194 }

5195 \def\Hy@VerboseLinkStart#1#2{%
5196   \ifHy@verbose
5197     \begingroup
5198     \Hy@safe@activetrue
5199     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5200     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5201     \xdef\Hy@VerboseGlobalTemp{%
5202       \Hy@VerboseGlobalTemp, %
5203       line \the\inputlineno
5204     }%
5205     \endgroup
5206     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5207     \@onelevel@sanitize\Hy@VerboseLinkInfo
5208   \fi
5209 }

5210 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5211 \def\Hy@VerboseLinkStop{%
5212   \ifHy@verbose
5213     \begingroup
5214     \edef\x{\endgroup
5215       \write\m@ne{%
5216         Package `hyperref' Info: %
5217         End of reference \Hy@VerboseLinkInfo.%
5218       }%
5219     }%
5220     \x
5221   \fi
5222 }

5223 \def\Hy@VerboseAnchor#1{%
5224   \ifHy@verbose
5225     \begingroup
5226     \Hy@safe@activetrue
5227     \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}%
5228   \endgroup
5229 \fi
5230 }

5231 \def\Hy@AllowHyphens{%
5232   \relax
5233   \ifhmode
5234     \penalty\@M
5235     \hskip\z@skip
5236   \fi
5237 }

```

```

5238 \DeclareRobustCommand*{\href}[1][]{%
5239   \begingroup
5240   \setkeys{href}{#1}%
5241   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5242 }
5243 \def\Hy@href#{%
5244   \hyper@normalise\href@
5245 }
5246 \begingroup
5247   \catcode`\$=6 %
5248   \catcode`\#=12 %
5249   \gdef\href$1{\expandafter\href@split$1##\}%
5250   \gdef\href@split$1##$2##$3\\$4{%
5251     \hyper@@link{$1}{$2}{$3}{$4}%
5252   }
5253 }%
5254 \endgroup

```

Option ‘page’.

```

5255 \define@key{href}{page}{%
5256   \def\Hy@href@page{#1}%
5257 }
5258 \let\Hy@href@page\@empty
5259 \newcount\c@Hy@tempcnt
5260 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5261 \def\Hy@MakeRemoteAction{%
5262   \ifx\Hy@href@page\@empty
5263     \def\Hy@href@page{0}%
5264   \else
5265     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5266     \ifnum\c@Hy@tempcnt<\@ne
5267       \Hy@Warning{%
5268         Invalid page number (\theHy@tempcnt)\MessageBreak
5269         for remote PDF file.\MessageBreak
5270         Using page 1%
5271       }%
5272     \def\Hy@href@page{0}%
5273   \else
5274     \global\advance\c@Hy@tempcnt\m@ne
5275     \edef\Hy@href@page{\theHy@tempcnt}%
5276   \fi
5277 }

```

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.

```

5278 \ifx\Hy@href@nextactionraw\@empty
5279 \else
5280   \Hy@pdfnewwindowsettrue
5281   \Hy@pdfnewwindowtrue
5282 \fi
5283 }

```

Option ‘pdfremotestartview’.

```

5284 \define@key{href}{pdfremotestartview}{%
5285   \setkeys{Hyp}{pdfremotestartview={#1}}%
5286 }

```

Option ‘pdfnewwindow’.

```

5287 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow

```

5288 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default
Option ‘ismap’.

```
5289 \newif\ifHy@href@ismap
5290 \define@key{href}{ismap}[true]{%
5291   \ltx@ifundefined{Hy@href@ismap#1}{%
5292     \Hy@Error{%
5293       Invalid value (#1) for key `ismap'.\MessageBreak
5294       Permitted values are `true' or `false'.\MessageBreak
5295       Ignoring `ismap'%
5296     }\@ehc
5297   }{%
5298     \csname Hy@href@ismap#1\endcsname
5299   }%
5300 }
```

Option ‘nextactionraw’.

```
5301 \let\Hy@href@nextactionraw\@empty
5302 \define@key{href}{nextactionraw}{%
5303   \edef\Hy@href@nextactionraw{#1}%
5304   \ifx\Hy@href@nextactionraw\@empty
5305     \else
5306       \Hy@Match\Hy@href@nextactionraw{ }{%
5307         ~(\HyPat@ObjRef/|<<.*[/S[ /.+>>|)%
5308         \[( ?\HyPat@ObjRef/|<<.*[/S[ /.+>>)+ ?)]$%
5309       }{%
5310         \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5311           \Hy@href@nextactionraw\MessageBreak
5312           The action is discarded%
5313       }%
5314     }%
5315     \ifx\Hy@href@nextactionraw\@empty
5316       \else
5317         \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5318       \fi
5319     \fi
5320 }
5321 \def\HyPat@ObjRef/{.+}
```

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

```
5322 \RequirePackage{url}
5323 \let\HyOrg@url\url
5324 \def\Hurl{\begingroup \Url}
5325 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5326 \def\nolinkurl@#1{\Hurl{#1}}
5327 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5328 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
5329 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5330 \providecommand\hyper@image[2]{#2}
5331 \def\hypertarget#1#2{%
5332   \ifHy@nesting
5333     \hyper@@anchor{#1}{#2}%
5334   \else
5335     \hyper@@anchor{#1}{\relax}#2%
5336   \fi
5337 }
```

`\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.

```

5338 \DeclareRobustCommand*\hyperref{%
5339   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5340 }
5341 \def\Hy@babelnormalise#1[#2]{%
5342   \begingroup
5343     \Hy@safe@activetrue
5344     \edef\Hy@tempa{%
5345       \endgroup
5346       \noexpand#1[{#2}]%
5347     }%
5348   \Hy@tempa
5349 }
5350 \def\@hyperref{\hyper@normalise\@hyperref}
5351 \def\@hyperref#1#2#3{%
5352   \edef\ref@one{\ifx\#2\else#2.\fi#3}%
5353   \expandafter\tryhyper@link\ref@one\{#1}%
5354 }
5355 \def\tryhyper@link#1\#2{%
5356   \hyper@@link{#2}{#1}%
5357 }

5358 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5359 \def\@hyperdef#1#2#3{%, category, name, text
5360   \ifx\#1\%
5361     \def\Hy@AnchorName{#2}%
5362   \else
5363     \def\Hy@AnchorName{#1.#2}%
5364   \fi
5365   \ifHy@nesting
5366     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5367   \else
5368     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
5369   \fi
5370 }

```

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

```

5371 \let\hyperrefundefinedlink\@firstofone
5372 \def\label@hyperref[#1]{%
5373   \expandafter\label@\@hyperref\csname r@#1\endcsname{#1}%
5374 }%
5375 \def\label@\@hyperref#1#2#3{%
5376   \ifx#1\relax
5377     \protect\G@refundefinedtrue
5378     \@latex@warning{%
5379       Hyper reference `#2' on page \thepage \space undefined%
5380     }%
5381     \begingroup
5382       \hyperrefundefinedlink{#3}%
5383     \endgroup
5384   \else
5385     \hyper@@link{\expandafter\@fifthoffive#1}%

```

```

5386     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5387   \fi
5388 }
5389 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5390                               % anchor text
5391   \@bsphack
5392   \ifx\#2\%
5393     \def\Hy@AnchorName{#3}%
5394   \else
5395     \def\Hy@AnchorName{#2.#3}%
5396   \fi
5397   \if@filesw
5398     \protected@write\@auxout{}{%
5399       \string\newlabel{#1}{\{ }\{ }\{ }\{ \Hy@AnchorName\} }\}%
5400     }%
5401   \fi
5402   \@esphack
5403   \ifHy@nesting
5404     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5405   \else
5406     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5407   \fi
5408 }

```

16.1 Link box support for XeTeX

```

5409 \newdimen\XeTeXLinkMargin
5410 \setlength{\XeTeXLinkMargin}{2pt}
5411 \ifxetex
5412   \font\XeTeXLink@font=pzdr at 1sp\relax
5413   \newcommand*\XeTeXLink@space{%
5414     \begingroup
5415       \XeTeXLink@font
5416       \@xxxii
5417     \endgroup
5418   }%
5419   \newcommand{\XeTeXLinkBox}[1]{%
5420     \begingroup
5421       \leavevmode
5422       \sbox\z@{#1}%
5423       \begingroup
5424         \dimen@=\dp\z@
5425         \advance\dimen@\XeTeXLinkMargin
5426         \setbox\tw@=\llap{%
5427           \hb@xt@\XeTeXLinkMargin{%
5428             \lower\dimen@\hbox{\XeTeXLink@space}%
5429           \hss
5430         }%
5431       }%
5432       \dp\tw@=\dp\z@
5433       \ht\tw@=\ht\z@
5434       \copy\tw@
5435     \endgroup
5436     \copy\z@
5437     \dimen@=\ht\z@
5438     \advance\dimen@\XeTeXLinkMargin
5439     \setbox\tw@=\rlap{%

```

```

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

```

17 Underlying basic hypertext macros

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

```

5459 \def\hyper@@link{\let\Hy@reserved@a\relax
5460   \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5461 }
5462 % #1: type
5463 % #2: URL
5464 % #3: destination name
5465 % #4: text
5466 \def\hyper@link@[#1]#2#3#4{%
5467   \ltx@ifempty{#4}{% link text
5468     \Hy@Warning{Suppressing empty link}%
5469   }{%
5470     \begingroup
5471     \protected@edef\Hy@tempa{#2}%
5472     \edef\Hy@tempb{#3}%
5473     \ifx\Hy@tempa\ltx@empty
5474       \ltx@ifempty\Hy@tempb\ltx@empty
5475       \Hy@Warning{Suppressing link with empty target}%
5476       \toks@{%
5477         \endgroup
5478         \ltx@secondoftwo
5479       }%
5480     \else
5481       \toks@{%
5482         \endgroup
5483         \hyper@link{#1}%
5484       }%
5485     \fi
5486   \else
5487     \toks@{%
5488       \endgroup
5489       \expandafter\hyper@readexternallink#2\{\{#1}%

```



```

5490     }%
5491     \fi
5492     \Hy@safe@activesfalse
5493     \toks@\expandafter{%
5494         \the\expandafter\toks@
5495         \expandafter{\Hy@tempb}{#4}%
5496     }%
5497     \the\toks@
5498 }%
5499 }

```

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.

```

5500 \def\hyper@readexternallink#1\|#2#3#4{%
5501     \begingroup
5502     \let\\\relax
5503     \expandafter\endgroup
5504     \expandafter\@hyper@\@readexternallink#1\#{2}\#{3}\#{4}%
5505 }
5506 \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.

```

5507     \@hyper@readexternallink{#2}\#{3}\#{4}#1::\#{1}%
5508 }

```

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

```

5509 \def\@pdftempwordfile{file}%
5510 \def\@pdftempwordrun{run}%
5511 \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**:

```

5512     \ifx\\\#6\\\%
5513         \@hyper@linkfile file:#7\\\#{3}\#{2}\#{7}%
5514     \else
5515         \ifx\\\#4\\\%
5516             \@hyper@linkfile file:#7\\\#{3}\#{2}\#{7}%
5517         \else

```

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

```

5518         \def\@pdftempa{#4}%

```

```

5519 \ifx\@pdftempa\@pdftempwordfile
5520 \@hyper@linkfile#7\{\#3}\#2}\#7}%
5521 \else

```

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

```

5522 \ifx\@pdftempa\@pdftempwordrun
5523 \ifHy@pdfa
5524 \Hy@Error{%
5525 PDF/A: Launch action is prohibited%
5526 }\@ehc
5527 \begingroup
5528 \leavevmode
5529 #2%
5530 \endgroup
5531 \else
5532 \@hyper@launch#7\{\#3}\#2}%
5533 \fi
5534 \else

```

otherwise its a URL

```

5535 \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
5536 \fi
5537 \fi
5538 \fi
5539 \fi
5540 }

```

By default, turn run: into file:

```

5541 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5542 \hyper@linkurl{\#2}\#3}%
5543 \Hy@linkfileprefix
5544 #1%
5545 \ifx\#3\%
5546 \else
5547 \hyper@hash
5548 #3%
5549 \fi
5550 }%
5551 }

```

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

```

5552 \def\@hyper@linkfile file:#1\#2#3#4{%
5553 %file url,link string, name, original uri
5554 \filename@parse{\#1}%
5555 \ifx\filename@ext\relax
5556 \edef\filename@ext{\XR@ext}%
5557 \fi
5558 \def\use@file{\filename@area\filename@base.\filename@ext}%
5559 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5560 \hyper@linkfile{\#2}\use@file{\#3}%
5561 }{%
5562 \ifx\@baseurl\@empty
5563 \hyper@linkurl{\#2}\#4\ifx\#3\else\hyper@hash#3\fi
5564 }%
5565 \else
5566 \hyper@linkurl{\#2}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5567 \fi

```

```

5569 }%
5570 }

5571 \def\Hy@ifStringEndsWith#1#2{%
5572   \begingroup
5573   \edef\x{#1}%
5574   \@onelevel@sanitize\x
5575   \edef\x{.x$}%
5576   \edef\y{#2}%
5577   \@onelevel@sanitize\y
5578   \edef\y{.y$}%
5579   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5580     \endgroup
5581     \ifx\relax##2\relax
5582       \expandafter\ltx@secondoftwo
5583     \else
5584       \expandafter\ltx@firstoftwo
5585     \fi
5586   }%
5587   \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5588 }

5589 \def\Hy@StringLocalhost{localhost}
5590 \@onelevel@sanitize\Hy@StringLocalhost
5591 \def\Hy@CleanupFile#1{%
5592   \edef#1{#1}%
5593   \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5594 }
5595 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5596   \begingroup
5597   \toks@{\endgroup}%
5598   \def\x{#1}%
5599   \ifx\x\@empty
5600     \def\x{#2}%
5601   \ifx\x\@empty
5602     \toks@{\endgroup\def#5{/#3}}%
5603   \else
5604     \@onelevel@sanitize\x
5605     \ifx\x\Hy@StringLocalhost
5606       \toks@{\endgroup\def#5{/#3}}%
5607     \fi
5608   \fi
5609   \fi
5610   \the\toks@
5611 }

```

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.

```

5612 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5613 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5614   \ifx\#1\%
5615     #2\Hy@Warning{Ignoring empty anchor}%
5616   \else

```

```

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

```

18 Option ‘destlabel’

```

5646 \ifHy@destlabel

```

```

\hyper@newdestlabel

```

```

5647 \def\hyper@newdestlabel#1#2{%
5648 \begingroup
5649 \Hy@safe@activetrue
5650 \edef\x{\endgroup
5651 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5652 }%
5653 \x
5654 }%

```

```

\hyper@destlabel@hook

```

```

5655 \providecommand*\hyper@destlabel@hook{}%

```

```

\Hy@DestRename

```

```

5656 \newcommand*\Hy@DestRename[2]{%
5657 \ltx@ifundefined{HyDL!#1}{%
5658 \begingroup
5659 \Hy@safe@activetrue
5660 \edef\dest@name{#1}%
5661 \edef\label@name{#2}%
5662 \hyper@destlabel@hook
5663 \Hy@isnotempty{dest@name}{%
5664 \Hy@isnotempty{label@name}{%

```

```

5665     \global\expandafter
5666     \let\csname HyDL!#1\endcsname\ltx@empty
5667     \if@filesw
5668     \protected@write\@auxout{}\ltx@empty
5669     \string\hyper@newdestlabel
5670     {#1}%
5671     {\label@name}%
5672     }%
5673     \fi
5674     }%
5675     }%
5676     \endgroup
5677     }{}%
5678     }%

```

\HyperDestRename

```

5679 \newcommand*\HyperDestRename[2]{%
5680   \AtBeginDocument{%
5681     \Hy@DestRename{#1}{#2}%
5682   }%
5683 }%
5684 \AtBeginDocument{%
5685   \let\HyperDestRename\Hy@DestRename
5686 }%

```

\Hy@IsNotEmpty

```

5687 \def\Hy@IsNotEmpty#1{%
5688   \ltx@ifundefined{#1}\ltx@gobble{%
5689     \expandafter\ifx\csname#1\endcsname\ltx@empty
5690     \expandafter\ltx@gobble
5691   \else
5692     \expandafter\ltx@firstofone
5693   \fi
5694   }%
5695 }%

5696 \ltx@GlobalAppendToMacro\label@hook{%
5697   \HyperDestRename\@currentHref\label@name
5698 }%

```

\HyperDestLabelReplace

```

5699 \def\HyperDestLabelReplace#1{%
5700   \ltx@ifundefined{HyDL@#1}{%
5701     #1%
5702   }{}%
5703   \csname HyDL@#1\endcsname
5704   }%
5705 }%

```

\HyperDestNameFilter

```

5706 \let\HyperDestNameFilter\HyperDestLabelReplace
5707 \else

```

\hyper@newdestlabel

```

5708 \let\hyper@newdestlabel\ltx@gobbletwo

```

`\HyperDestLabelReplace`

```
5709 \let\HyperDestLabelReplace\ltx@firstofone
```

`\HyperDestRename`

```
@gobbletwo
```

```
5710 \fi
```

```
5711 \Hy@DisableOption{destlabel}
```

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

```
5712 \AddLineBeginAux{%
```

```
5713 \string\providecommand\string\hyper@newdestlabel[2]{}%
```

```
5714 }
```

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.

```
5715 \let\htmladdimg\hyperimage
```

```
5716 \def\htmladdnormallink#1#2{\href{#2}{#1}}
```

```
5717 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
```

```
5718 \def\htmlref#1#2{% anchor text, label
```

```
5719 \label@hyperref{#2}{#1}%
```

```
5720 }
```

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.

```
5721 \def\@@latextohtmlX{%
```

```
5722 \let\hhyperref\hyperref
```

```
5723 \def\hyperref##1##2##3##4{% anchor text for HTML
```

```
5724 % text to print before label in print
```

```
5725 % label
```

```
5726 % post-label text in print
```

```
5727 ##2\ref{##4}##3%
```

```
5728 }%
```

```
5729 }
```

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.

```
5730 \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

```
5731 \def\HyField@NewFlag#1#2{%
5732   \lowercase{\HyField@NewOption{#2}}%
5733   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5734 }
```

\HyField@NewFlagOnly

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

\HyField@NewOption #1: option name

```
5738 \def\HyField@NewOption#1{%
5739   \expandafter\newif\csname ifFld@#1\endcsname
5740   \define@key{Field}{#1}[true]{%
5741     \lowercase{\Field@boolkey{##1}}{#1}%
5742   }%
5743 }
```

\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

```
5744 \def\HyField@NewBitsetFlag#1#2#3#4{%
5745   \begingroup
5746   \count@=#4\relax
5747   \advance\count@\m@ne
5748   \def\x##1{%
5749     \endgroup
5750     \expandafter\def\csname ifFld@#3@#1\endcsname{##1}%
5751     \expandafter\ifx\csname ifFld@#3@#1\endcsname\relax
5752       \expandafter\edef\csname ifFld@#3@#1\endcsname{%
5753         (\number#4) #2%
5754       }%
5755     \else
5756       \expandafter\edef\csname ifFld@#3@#1\endcsname{%
5757         \csname ifFld@#3@#1\endcsname
5758         /#2%
5759       }%
5760     \fi
5761   }%
5762   \expandafter\x\expandafter{\the\count@}%
5763 }
```

```

\HyField@UseFlag The bit set is HyField@#1
5764 \def\HyField@UseFlag#1#2{%
5765   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5766 }

\HyField@@UseFlag
5767 \def\HyField@@UseFlag#1#2{%
5768   \bitsetSetValue{HyField@#2}{%
5769     \csname HyField@#2@#1\endcsname
5770   }{%
5771     \csname ifFld@#1\endcsname 1\else 0\fi
5772   }%
5773 }

\HyField@SetFlag The bit set is HyField@#1
5774 \def\HyField@SetFlag#1#2{%
5775   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5776 }

\HyField@@SetFlag
5777 \def\HyField@@SetFlag#1#2{%
5778   \bitsetSetValue{HyField@#2}{%
5779     \csname HyField@#2@#1\endcsname
5780   }{1}%
5781 }

\HyField@PrintFlags
5782 \def\HyField@PrintFlags#1#2{%
5783   \ifHy@verbose
5784     \begingroup
5785     \let\Hy@temp\@empty
5786     \let\MessageBreak\relax
5787     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5788     \bitsetGetSetBitList{HyField@#1}\do{%
5789       \edef\Hy@temp{%
5790         \Hy@temp
5791         \csname HyField@#1@\x\endcsname\MessageBreak
5792       }%
5793     }%
5794   \edef\x{\endgroup
5795     \noexpand\Hy@Info{%
5796       Field flags: %
5797       \expandafter\ifx\@car#1\@nil S\else/\fi
5798       #1 %
5799       \bitsetGetDec{HyField@#1} %
5800       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5801       \Hy@temp
5802       for #2%
5803     }%
5804   }\x
5805 \fi
5806 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”


```

5807 \HyField@NewFlag{Ff}{ReadOnly}{1}
5808 \HyField@NewFlag{Ff}{Required}{2}
5809 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5810 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5811 \HyField@NewFlag{Ff}{Radio}{16}
5812 \HyField@NewFlag{Ff}{Pushbutton}{17}
5813 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5814 \HyField@NewFlag{Ff}{Multiline}{13}
5815 \HyField@NewFlag{Ff}{Password}{14}
5816 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5817 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5818 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5819 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5820 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5821 \HyField@NewFlag{Ff}{Combo}{18}
5822 \HyField@NewFlag{Ff}{Edit}{19}
5823 \HyField@NewFlag{Ff}{Sort}{20}
5824 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5825 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5826 \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.

```

5827 \newif\ifFld@popdown
5828 \define@key{Field}{popdown}[true]{%
5829   \lowercase{\Field@boolkey{#1}}{popdown}%
5830 }

```

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.

```

5831 \HyField@NewFlag{F}{Invisible}{1}
5832 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5833 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5834 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5835 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5836 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5837 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5838 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5839 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5840 \ifHy@pdfa
5841   \def\HyField@PDFAFldFlagWarning#1#2{%
5842     \Hy@Warning{%
5843       PDF/A: Annotation flag `#1' must\MessageBreak
5844       be set to `#2'%
5845     }%
5846   }%
5847   \Fld@invisiblefalse
5848   \def\Fld@invisibletrue{%

```

```

5849 \HyField@PDFAFFlagWarning{invisible}{false}%
5850 }%
5851 \Fld@hiddenfalse
5852 \def\Fld@hiddentrue{%
5853 \HyField@PDFAFFlagWarning{hidden}{false}%
5854 }%
5855 \Fld@printtrue
5856 \def\Fld@printfalse{%
5857 \HyField@PDFAFFlagWarning{print}{true}%
5858 }%
5859 \Fld@nozoomtrue
5860 \def\Fld@nozoomfalse{%
5861 \HyField@PDFAFFlagWarning{nozoom}{true}%
5862 }%
5863 \Fld@norotatetrue
5864 \def\Fld@norotatefalse{%
5865 \HyField@PDFAFFlagWarning{norotate}{true}%
5866 }%
5867 \Fld@noviewfalse
5868 \def\Fld@noviewtrue{%
5869 \HyField@PDFAFFlagWarning{noview}{false}%
5870 }%
5871 \fi

```

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

```

5872 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5873 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5874 \HyField@NewFlag{Submit}{GetMethod}{4}
5875 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5876 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5877 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5878 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5879 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5880 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5881 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5882 \HyField@NewFlag{Submit}{ExclFKey}{12}
5883 \HyField@NewFlag{Submit}{EmbedForm}{14}

5884 \define@key{Field}{export}{%
5885 \lowercase{\def\Hy@temp{#1}}%
5886 \@ifundefined{Fld@export@\Hy@temp}{%
5887 \@onelevel@sanitize\Hy@temp
5888 \Hy@Error{%
5889 Unknown export format `\'Hy@temp'.\MessageBreak
5890 Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5891 }\@ehc
5892 }{%
5893 \let\Fld@export\Hy@temp
5894 }%
5895 }

5896 \def\Fld@export{fdf}
5897 \@namedef{Fld@export@fdf}{0}%
5898 \@namedef{Fld@export@html}{1}%
5899 \@namedef{Fld@export@xfdf}{2}%
5900 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```
5901 \def\HyField@FlagsSubmit{%
5902   \bitsetReset{HyField@Submit}%
5903   \ifcase\@nameuse{Fld@export@\Fld@export} %
5904     % FDF
5905     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5906     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5907     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5908     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5909     \HyField@UseFlag{Submit}{CanonicalFormat}%
5910     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5911     \HyField@UseFlag{Submit}{ExclFKey}%
5912     \HyField@UseFlag{Submit}{EmbedForm}%
5913   \or % HTML
5914     \HyField@SetFlag{Submit}{ExportFormat}%
5915     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5916     \HyField@UseFlag{Submit}{GetMethod}%
5917     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5918     \HyField@UseFlag{Submit}{CanonicalFormat}%
5919   \or % XFDF
5920     \HyField@SetFlag{Submit}{XFDF}%
5921     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5922     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5923     \HyField@UseFlag{Submit}{CanonicalFormat}%
5924   \or % PDF
5925     \HyField@SetFlag{Submit}{SubmitPDF}%
5926     \HyField@UseFlag{Submit}{GetMethod}%
5927   \fi
5928   \HyField@PrintFlags{Submit}{submit button field}%
5929   \bitsetIsEmpty{HyField@Submit}{%
5930     \let\Fld@submitflags\ltx@empty
5931   }{%
5932     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5933   }%
5934 }
```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
5935 \def\HyField@FlagsAnnot#1{%
5936   \bitsetReset{HyField@F}%
5937   \HyField@UseFlag{F}{Invisible}%
5938   \HyField@UseFlag{F}{Hidden}%
5939   \HyField@UseFlag{F}{Print}%
5940   \HyField@UseFlag{F}{NoZoom}%
5941   \HyField@UseFlag{F}{NoRotate}%
5942   \HyField@UseFlag{F}{NoView}%
5943   \HyField@UseFlag{F}{Locked}%
5944   \HyField@UseFlag{F}{ToggleNoView}%
5945   \HyField@UseFlag{F}{LockedContents}%
5946   \HyField@PrintFlags{F}{#1}%
5947   \bitsetIsEmpty{HyField@F}{%
5948     \let\Fld@annotflags\ltx@empty
5949   }{%
5950     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%

```

```

5951 }%
5952 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5953 \def\HyField@FlagsPushButton{%
5954 \HyField@FlagsAnnot{push button field}%
5955 \bitsetReset{HyField@Ff}%
5956 \HyField@UseFlag{Ff}{ReadOnly}%
5957 \HyField@UseFlag{Ff}{Required}%
5958 \HyField@UseFlag{Ff}{NoExport}%
5959 \HyField@SetFlag{Ff}{PushButton}%
5960 \HyField@PrintFlags{Ff}{push button field}%
5961 \bitsetIsEmpty{HyField@Ff}{%
5962 \let\Fld@flags\ltx@empty
5963 }{%
5964 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5965 }%
5966 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5967 \def\HyField@FlagsCheckBox{%
5968 \HyField@FlagsAnnot{check box field}%
5969 \bitsetReset{HyField@Ff}%
5970 \HyField@UseFlag{Ff}{ReadOnly}%
5971 \HyField@UseFlag{Ff}{Required}%
5972 \HyField@UseFlag{Ff}{NoExport}%
5973 \HyField@PrintFlags{Ff}{check box field}%
5974 \bitsetIsEmpty{HyField@Ff}{%
5975 \let\Fld@flags\ltx@empty
5976 }{%
5977 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5978 }%
5979 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5980 \def\HyField@FlagsRadioButton{%
5981 \HyField@FlagsAnnot{radio button field}%
5982 \bitsetReset{HyField@Ff}%
5983 \HyField@UseFlag{Ff}{ReadOnly}%
5984 \HyField@UseFlag{Ff}{Required}%
5985 \HyField@UseFlag{Ff}{NoExport}%
5986 \HyField@UseFlag{Ff}{NoToggleToOff}%
5987 \HyField@SetFlag{Ff}{Radio}%
5988 \HyField@UseFlag{Ff}{RadiosInUnison}%
5989 \HyField@PrintFlags{Ff}{radio button field}%
5990 \bitsetIsEmpty{HyField@Ff}{%
5991 \let\Fld@flags\ltx@empty
5992 }{%
5993 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5994 }%
5995 }

```

20.1.7 Text fields

\HyField@FlagsText

```
5996 \def\HyField@FlagsText{%
5997   \HyField@FlagsAnnot{text field}%
5998   \bitsetReset{HyField@Ff}%
5999   \HyField@UseFlag{Ff}{ReadOnly}%
6000   \HyField@UseFlag{Ff}{Required}%
6001   \HyField@UseFlag{Ff}{NoExport}%
6002   \HyField@UseFlag{Ff}{Multiline}%
6003   \HyField@UseFlag{Ff}{Password}%
6004   \HyField@UseFlag{Ff}{FileSelect}%
6005   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6006   \HyField@UseFlag{Ff}{DoNotScroll}%
6007   \ifFld@comb
6008     \ifcase0\ifFld@multiline
6009       \else\ifFld@password
6010       \else\ifFld@fileselect
6011       \else 1\fi\fi\fi\relax
6012     \Hy@Error{%
6013       Field option `comb' cannot used together with\MessageBreak
6014       `multiline', `password', or `fileselect'%
6015     }\@ehc
6016   \else
6017     \HyField@UseFlag{Ff}{Comb}%
6018   \fi
6019 \fi
6020 \HyField@UseFlag{Ff}{RichText}%
6021 \HyField@PrintFlags{Ff}{text field}%
6022 \bitsetIsEmpty{HyField@Ff}{%
6023   \let\Fld@flags\ltx@empty
6024 }{%
6025   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6026 }%
6027 }
```

20.1.8 Choice fields

\HyField@FlagsChoice

```
6028 \def\HyField@FlagsChoice{%
6029   \HyField@FlagsAnnot{choice field}%
6030   \bitsetReset{HyField@Ff}%
6031   \HyField@UseFlag{Ff}{ReadOnly}%
6032   \HyField@UseFlag{Ff}{Required}%
6033   \HyField@UseFlag{Ff}{NoExport}%
6034   \HyField@UseFlag{Ff}{Combo}%
6035   \ifFld@combo
6036     \HyField@UseFlag{Ff}{Edit}%
6037   \fi
6038   \HyField@UseFlag{Ff}{Sort}%
6039   \HyField@UseFlag{Ff}{MultiSelect}%
6040   \ifFld@combo
6041     \ifFld@edit
6042       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6043     \fi
6044   \fi
6045   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

6046 \HyField@PrintFlags{Ff}{choice field}%
6047 \bitsetIsEmpty{HyField@Ff}{%
6048   \let\Fld@flags\ltx@empty
6049 }{%
6050   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6051 }%
6052 }

```

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`.

```

6053 \def\HyField@PDFChoices#1{%
6054   \begingroup
6055   \global\let\Fld@choices\ltx@empty
6056   \let\HyTmp@optlist\ltx@empty
6057   \let\HyTmp@optitem\relax
6058   \count@=0 %
6059   \kv@parse{#1}{%
6060     \Hy@pdfstringdef\kv@key\kv@key
6061     \ifx\kv@value\relax
6062       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6063         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6064       \else
6065         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6066       \fi
6067     \else
6068       \Hy@pdfstringdef\kv@value\kv@value
6069       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
6070     \fi
6071     \edef\HyTmp@optlist{%
6072       \HyTmp@optlist
6073       \HyTmp@optitem{\the\count@}{\kv@key}0%
6074     }%
6075     \advance\count@ by 1 %
6076     \@gobbletwo
6077   }%
6078   \xdef\Fld@choices{/Opt[\Fld@choices]}%
6079   \ifFld@multiselect
6080     \HyField@@PDFChoices{DV}\Fld@default
6081     \HyField@@PDFChoices{V}\Fld@value
6082   \else
6083     \ifx\Fld@default\relax
6084     \else
6085       \pdfstringdef\Hy@gtemp\Fld@default
6086       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6087     \fi
6088     \ifx\Fld@value\relax
6089     \else
6090       \pdfstringdef\Hy@gtemp\Fld@value
6091       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6092     \fi
6093   \fi
6094   \endgroup
6095 }

```

\HyField@@PDFChoices

```
6096 \def\HyField@@PDFChoices#1#2{%
6097   \ifx#2\relax
6098   \else
6099     \count@=0 %
6100     \def\HyTmp@optitem##1##2##3{%
6101       \def\HyTmp@key{##2}%
6102       \ifx\HyTmp@key\Hy@gtemp
6103         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6104           \HyTmp@optlist
6105           \HyTmp@optitem{##1}{##2}1%
6106         }%
6107         \let\HyTmp@found=Y%
6108       \else
6109         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6110           \HyTmp@optlist
6111           \HyTmp@optitem{##1}{##2}##3%
6112         }%
6113       \fi
6114     }%
6115     \expandafter\comma@parse\expandafter{#2}{%
6116       \pdfstringdef\Hy@gtemp\comma@entry
6117       \let\HyTmp@found=N %
6118       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6119       \HyTmp@optlist
6120       \ifx\HyTmp@found Y%
6121         \advance\count@ by 1 %
6122       \else
6123         \@onelevel@sanitize\comma@entry
6124         \PackageWarning{hyperref}{%
6125           \string\ChoiceBox: Ignoring value `\'comma@entry',%
6126           \MessageBreak
6127           it cannot be found in the choices%
6128         }%
6129       \fi
6130       \@gobble
6131     }%
6132     \def\HyTmp@optitem##1##2##3{%
6133       \ifnum##3=1 %
6134         (##2)%
6135       \fi
6136     }%
6137     \ifcase\count@
6138     \or
6139       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6140     \else
6141       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6142       \ifx#1V%
6143         \def\HyTmp@optitem##1##2##3{%
6144           \ifnum##3=1 %
6145             \@firstofone{ ##1}%
6146           \fi
6147         }%
6148         \edef\HyTmp@optlist{\HyTmp@optlist}%
6149         \xdef\Fld@choices{%
6150           \Fld@choices
6151           /I[\expandafter\@firstofone\HyTmp@optlist]%

```

```

6152     }%
6153     \fi
6154     \fi
6155     \fi
6156 }

```

20.3 Forms

\HyField@SetKeys

```

6157 \def\HyField@SetKeys{%
6158   \kvsetkeys{Field}%
6159 }

6160 \newif\ifFld@checked
6161 \newif\ifFld@disabled
6162 \Fld@checkedfalse
6163 \Fld@disabledfalse
6164 \newcount\Fld@menulength
6165 \newdimen\Fld@Width
6166 \newdimen\Fld@charsize
6167 \Fld@charsize=10\p@
6168 \def\Fld@maxlen{0}
6169 \def\Fld@align{0}
6170 \def\Fld@color{0 0 0 rg}
6171 \def\Fld@bcolor{1 1 1}
6172 \def\Fld@bordercolor{1 0 0}
6173 \def\Fld@bordersep{1\p@}
6174 \def\Fld@borderwidth{1}
6175 \def\Fld@borderstyle{S}
6176 \def\Fld@cbsymbol{4}
6177 \def\Fld@radiosymbol{H}
6178 \def\Fld@rotation{0}
6179 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
6180 \def\endForm{\@endForm}
6181 \newif\ifForm@html
6182 \Form@htmlfalse
6183 \def\Form@boolkey#1#2{%
6184   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6185 }
6186 \define@key{Form}{action}{%
6187   \hyper@normalise\Hy@DefFormAction{#1}%
6188 }
6189 \def\Hy@DefFormAction{\def\Form@action}
6190 \def\enc@html{html}
6191 \define@key{Form}{encoding}{%
6192   \def\Hy@tempa{#1}%
6193   \ifx\Hy@tempa\enc@html
6194     \Form@htmltrue
6195     \def\Fld@export{html}%
6196   \else
6197     \Hy@Warning{%
6198       Form `encoding' key with \MessageBreak
6199       unknown value `#1'%
6200     }%
6201     \Form@htmlfalse
6202   \fi
6203 }

```



```

6204 \define@key{Form}{method}{%
6205   \lowercase{\def\Hy@temp{#1}}%
6206   \@ifundefined{Form@method@\Hy@temp}{%
6207     \@onelevel@sanitize\Hy@temp
6208     \Hy@Error{%
6209       Unknown method `~\Hy@temp'.\MessageBreak
6210       Known values are `post' and `get'%
6211     }\@ehc
6212   }{%
6213     \let\Form@method\Hy@temp
6214     \ifcase\@nameuse{Form@method@\Hy@temp} %
6215       \Fld@getmethodfalse
6216     \else
6217       \Fld@getmethodtrue
6218     \fi
6219   }%
6220 }
6221 \def\Form@method{}
6222 \@namedef{Form@method@post}{0}
6223 \@namedef{Form@method@get}{1}

6224 \newif\ifHyField@NeedAppearances
6225 \def\HyField@NeedAppearancesfalse{%
6226   \global\let\ifHyField@NeedAppearances\iffalse
6227 }
6228 \def\HyField@NeedAppearancetrue{%
6229   \global\let\ifHyField@NeedAppearances\iftrue
6230 }
6231 \HyField@NeedAppearancetrue
6232 \define@key{Form}{NeedAppearances}[true]{%
6233   \edef\Hy@tempa{#1}%
6234   \ifx\Hy@tempa\Hy@true
6235     \HyField@NeedAppearancetrue
6236   \else
6237     \ifx\Hy@tempa\Hy@false
6238       \HyField@NeedAppearancesfalse
6239     \else
6240       \Hy@Error{%
6241         Unexpected value `~\Hy@tempa'\MessageBreak
6242         of option `NeedAppearances' instead of\MessageBreak
6243         `true' or `false'%
6244       }\@ehc
6245     \fi
6246   \fi
6247 }
6248 \def\Field@boolkey#1#2{%
6249   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6250 }
6251 \ifHy@texht
6252   \newtoks\Field@toks
6253   \Field@toks={ }%
6254   \def\Field@addtoks#1#2{%
6255     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6256     \@processme
6257   }%
6258 \else
6259   \def\Hy@WarnHTMLFieldOption#1{%
6260     \Hy@Warning{%

```

```

6261     HTML field option `#1'\MessageBreak
6262     is ignored%
6263 }%
6264 }%
6265 \fi
6266 \def\Fld@checkequals#1=#2=#3\\{%
6267   \def\@currDisplay{#1}%
6268   \ifx\\#2\\%
6269     \def\@currValue{#1}%
6270   \else
6271     \def\@currValue{#2}%
6272   \fi
6273   \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
6274 }
6275 \define@key{Field}{loc}{%
6276   \def\Fld@loc{#1}%
6277 }
6278 \define@key{Field}{checked}[true]{%
6279   \lowercase{\Field@boolkey{#1}}{checked}%
6280 }
6281 \define@key{Field}{disabled}[true]{%
6282   \lowercase{\Field@boolkey{#1}}{disabled}%
6283 }
6284 \ifHy@texht
6285   \define@key{Field}{accesskey}{%
6286     \Field@addtoks{accesskey}{#1}%
6287   }%
6288   \define@key{Field}{tabkey}{%
6289     \Field@addtoks{tabkey}{#1}%
6290   }%
6291 \else
6292   \define@key{Field}{accesskey}{%
6293     \Hy@WarnHTMLFieldOption{accesskey}%
6294   }%
6295   \define@key{Field}{tabkey}{%
6296     \Hy@WarnHTMLFieldOption{tabkey}%
6297   }%
6298 \fi
6299 \define@key{Field}{name}{%
6300   \def\Fld@name{#1}%
6301 }
6302 \let\Fld@altname\relax
6303 \define@key{Field}{altname}{%
6304   \def\Fld@altname{#1}%
6305 }
6306 \let\Fld@mappingname\relax
6307 \define@key{Field}{mappingname}{%
6308   \def\Fld@mappingname{#1}%
6309 }
6310 \define@key{Field}{width}{%
6311   \def\Fld@width{#1}%
6312   \Field@Width#1\setbox0=\hbox{m}%
6313 }
6314 \define@key{Field}{maxlen}{%
6315   \def\Fld@maxlen{#1}%
6316 }
6317 \define@key{Field}{menulength}{%

```

```

6318 \Fld@menulength=#1\relax
6319 }
6320 \define@key{Field}{height}{%
6321 \def\Fld@height{#1}%
6322 }
6323 \define@key{Field}{charsize}{%
6324 \setlength{\Fld@charsize}{#1}%
6325 }
6326 \define@key{Field}{borderwidth}{%
6327 \Hy@defaultbp\Fld@borderwidth{#1}%
6328 }
6329 \def\Hy@defaultbp#1#2{%
6330 \begingroup
6331 \afterassignment\Hy@defaultbpAux
6332 \dimen@=#2bp\relax{#1}{#2}%
6333 }
6334 \begingroup\expandafter\expandafter\expandafter\endgroup
6335 \expandafter\ifx\csname dimexpr\endcsname\relax
6336 \def\Hy@defaultbpAux#1\relax#2#3{%
6337 \ifx!#1!%
6338 \endgroup
6339 \def#2{#3}%
6340 \else
6341 \dimen@=.99626\dimen@
6342 \edef\x{\endgroup
6343 \def\noexpand#2{%
6344 \strip@pt\dimen@
6345 }%
6346 }\x
6347 \fi
6348 }%
6349 \else
6350 \def\Hy@defaultbpAux#1\relax#2#3{%
6351 \ifx!#1!%
6352 \endgroup
6353 \def#2{#3}%
6354 \else
6355 \edef\x{\endgroup
6356 \def\noexpand#2{%
6357 \strip@pt\dimexpr\dimen@*800/803\relax
6358 }%
6359 }\x
6360 \fi
6361 }%
6362 \fi
6363 \define@key{Field}{borderstyle}{%
6364 \let\Hy@temp\Fld@borderstyle
6365 \def\Fld@borderstyle{#1}%
6366 \Hy@Match\Fld@borderstyle{}{%
6367 ~[SDBIU]$%
6368 }{}{%
6369 \Hy@Warning{%
6370 Invalid value `~@pdfborderstyle'\MessageBreak
6371 for option `pdfborderstyle'. Valid values:\MessageBreak
6372 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6373 \space\space I (Inset), U (Underline)\MessageBreak
6374 Option setting is ignored%

```

```

6375 }%
6376 \let\Fld@borderstyle\Hy@temp
6377 }%
6378 }
6379 \define@key{Field}{bordersep}{%
6380 \def\Fld@bordersep{#1}%
6381 }
6382 \define@key{Field}{default}{%
6383 \Hy@pdfstringdef\Fld@default{#1}%
6384 }
6385 \define@key{Field}{align}{%
6386 \def\Fld@align{#1}%
6387 }
6388 \define@key{Field}{value}{%
6389 \Hy@pdfstringdef\Fld@value{#1}%
6390 }
6391 \define@key{Field}{checkboxsymbol}{%
6392 \Fld@DingDef\Fld@cbsymbol{#1}%
6393 }
6394 \define@key{Field}{radiosymbol}{%
6395 \Fld@DingDef\Fld@radiosymbol{#1}%
6396 }
6397 \def\Fld@DingDef#1#2{%
6398 \let\Fld@temp\ltx@empty
6399 \Fld@@@DingDef#2\ding{ }\@nil
6400 \let#1\Fld@temp
6401 }
6402 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6403 \expandafter\def\expandafter\Fld@temp\expandafter{%
6404 \Fld@temp
6405 #1%
6406 }%
6407 \ifx\#3\%
6408 \expandafter\@gobble
6409 \else
6410 \begingroup
6411 \lccode`0=#2\relax
6412 \lowercase{\endgroup
6413 \expandafter\def\expandafter\Fld@temp\expandafter{%
6414 \Fld@temp
6415 0%
6416 }%
6417 }%
6418 \expandafter\@firstofone
6419 \fi
6420 }%
6421 \Fld@@@DingDef#3\@nil
6422 }%
6423 }

6424 \define@key{Field}{rotation}{%
6425 \def\Fld@rotation{#1}%
6426 }

6427 \define@key{Field}{backgroundcolor}{%
6428 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6429 }
6430 \define@key{Field}{bordercolor}{%
6431 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%

```

```

6432 }
6433 \define@key{Field}{color}{%
6434   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6435 }

6436 \let\Fld@onclick@code\ltx@empty
6437 \let\Fld@format@code\ltx@empty
6438 \let\Fld@validate@code\ltx@empty
6439 \let\Fld@calculate@code\ltx@empty
6440 \let\Fld@keystroke@code\ltx@empty
6441 \let\Fld@onfocus@code\ltx@empty
6442 \let\Fld@onblur@code\ltx@empty
6443 \let\Fld@onmousedown@code\ltx@empty
6444 \let\Fld@onmouseup@code\ltx@empty
6445 \let\Fld@onenter@code\ltx@empty
6446 \let\Fld@onexit@code\ltx@empty
6447 \def\Hy@temp#1{%
6448   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6449 }
6450 \def\Hy@@temp#1#2{%
6451   \ifHy@pdfa
6452     \define@key{Field}{#2}{%
6453       \Hy@Error{%
6454         PDF/A: Additional action `#2' is prohibited%
6455       }\@ehc
6456     }%
6457   \else
6458     \define@key{Field}{#2}{%
6459       \def#1{##1}%
6460     }%
6461   \fi
6462 }
6463 \Hy@temp{keystroke}
6464 \Hy@temp{format}
6465 \Hy@temp{validate}
6466 \Hy@temp{calculate}
6467 \Hy@temp{onfocus}
6468 \Hy@temp{onblur}
6469 \Hy@temp{onenter}
6470 \Hy@temp{onexit}

6471 \let\Fld@calculate@sortkey\ltx@empty
6472 \define@key{Field}{calculatesortkey}[1]{%
6473   \def\Fld@calculate@sortkey{#1}%
6474 }

6475 \ifHy@texht
6476   \def\Hy@temp#1{%
6477     \define@key{Field}{#1}{%
6478       \Field@addtoks{#1}{##1}%
6479     }%
6480   }%
6481   \else
6482     \def\Hy@temp#1{%
6483       \define@key{Field}{#1}{%
6484         \Hy@WarnHTMLFieldOption{#1}%
6485       }%
6486     }%
6487   \fi

```

```

6488 \Hy@temp{ondblclick}
6489 \Hy@temp{onmousedown}
6490 \Hy@temp{onmouseup}
6491 \Hy@temp{onmouseover}
6492 \Hy@temp{onmousemove}
6493 \Hy@temp{onmouseout}
6494 \Hy@temp{onkeydown}
6495 \Hy@temp{onkeyup}
6496 \Hy@temp{onselect}
6497 \Hy@temp{onchange}
6498 \Hy@temp{onkeypress}
6499 \ifHy@texht
6500   \define@key{Field}{onclick}{%
6501     \Field@addtoks{onclick}{#1}%
6502   }%
6503 \else
6504   \ifHy@pdfa
6505     \define@key{Field}{onclick}{%
6506       \Hy@Error{%
6507         PDF/A: Action `onclick' is prohibited%
6508       } \@ehc
6509     }%
6510   \else
6511     \define@key{Field}{onclick}{%
6512       \def\Fld@onclick@code{#1}%
6513     }%
6514   \fi
6515 \fi

6516 \DeclareRobustCommand\TextField{%
6517   \@ifnextchar[{\@TextField}{\@TextField[]}%
6518 }
6519 \DeclareRobustCommand\ChoiceMenu{%
6520   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6521 }
6522 \DeclareRobustCommand\CheckBox{%
6523   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6524 }
6525 \DeclareRobustCommand\PushButton{%
6526   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6527 }
6528 \DeclareRobustCommand\Gauge{%
6529   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6530 }
6531 \DeclareRobustCommand\Submit{%
6532   \@ifnextchar[{\@Submit}{\@Submit[]}%
6533 }
6534 \DeclareRobustCommand\Reset{%
6535   \@ifnextchar[{\@Reset}{\@Reset[]}%
6536 }
6537 \def\LayoutTextField#1#2{% label, field
6538   \def\Hy@temp{#1}%
6539   \ifx\Hy@temp\@empty
6540     #2%
6541   \else
6542     #1 #2%
6543   \fi
6544 }

```

```

6545 \def\LayoutChoiceField#1#2{% label, field
6546   \def\Hy@temp{#1}%
6547   \ifx\Hy@temp\@empty
6548     #2%
6549   \else
6550     #1 #2%
6551   \fi
6552 }
6553 \def\LayoutCheckField#1#2{% label, field
6554   \def\Hy@temp{#1}%
6555   \ifx\Hy@temp\@empty
6556     #2%
6557   \else
6558     #1 #2%
6559   \fi
6560 }
6561 \def\LayoutPushButtonField#1{% button
6562   #1%
6563 }
6564 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6565 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6566 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6567 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6568 \def\MakeButtonField#1{%
6569   \sbox0{%
6570     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6571   }%
6572   \@tempdima\ht0 %
6573   \advance\@tempdima by \Fld@borderwidth bp %
6574   \advance\@tempdima by \Fld@borderwidth bp %
6575   \ht0\@tempdima
6576   \@tempdima\dp0 %
6577   \advance\@tempdima by \Fld@borderwidth bp %
6578   \advance\@tempdima by \Fld@borderwidth bp %
6579   \dp0\@tempdima
6580   \box0\relax
6581 }
6582 \def\DefaultHeightofSubmit{14pt}
6583 \def\DefaultWidthofSubmit{2cm}
6584 \def\DefaultHeightofReset{14pt}
6585 \def\DefaultWidthofReset{2cm}
6586 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6587 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6588 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6589 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6590 \def\DefaultHeightofText{\normalbaselineskip}
6591 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6592 \def\DefaultWidthofText{3cm}
6593 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6594 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6595 \def\DefaultOptionsofPushButton{print}
6596 \def\DefaultOptionsofCheckBox{print}
6597 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6598 \def\DefaultOptionsofListBox{print}
6599 \def\DefaultOptionsofComboBox{print,edit,sort}
6600 \def\DefaultOptionsofPopdownBox{print}

```

```
6601 \def\DefaultOptionsofRadio{print,notoggletooff}
```

21 Setup

```
6602 \ifHy@hyperfigures
6603 \Hy@Info{Hyper figures ON}%
6604 \else
6605 \Hy@Info{Hyper figures OFF}%
6606 \fi
6607 \ifHy@nesting
6608 \Hy@Info{Link nesting ON}%
6609 \else
6610 \Hy@Info{Link nesting OFF}%
6611 \fi
6612 \ifHy@hyperindex
6613 \Hy@Info{Hyper index ON}%
6614 \else
6615 \Hy@Info{Hyper index OFF}%
6616 \fi
6617 \ifHy@backref
6618 \Hy@Info{backreferencing ON}%
6619 \else
6620 \Hy@Info{backreferencing OFF}%
6621 \fi
6622 \ifHy@colorlinks
6623 \Hy@Info{Link coloring ON}%
6624 \else
6625 \Hy@Info{Link coloring OFF}%
6626 \fi
6627 \ifHy@ocgcolorlinks
6628 \Hy@Info{Link coloring with OCG ON}%
6629 \else
6630 \Hy@Info{Link coloring with OCG OFF}%
6631 \fi
6632 \ifHy@pdfa
6633 \Hy@Info{PDF/A mode ON}%
6634 \else
6635 \Hy@Info{PDF/A mode OFF}%
6636 \fi
```

22 Low-level utility macros

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

```
6637 \edef\hyper@hash{\string#}
6638 \edef\hyper@tilde{\string~}
6639 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6640 \def\@currentHref{Doc-Start}
6641 \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.

```
6642 \Hy@AtBeginDocument{%
6643 \Hy@pdfstringtrue
6644 \PDF@SetupDoc
```



```

6645 \let\PDF@SetupDoc\@empty
6646 \Hy@DisableOption{pdfpagescrop}%
6647 \Hy@DisableOption{pdfpagemode}%
6648 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6649 \Hy@DisableOption{pdfdirection}%
6650 \Hy@DisableOption{pdfviewarea}%
6651 \Hy@DisableOption{pdfviewclip}%
6652 \Hy@DisableOption{pdfprintarea}%
6653 \Hy@DisableOption{pdfprintclip}%
6654 \Hy@DisableOption{pdfprintsclaling}%
6655 \Hy@DisableOption{pdfduplex}%
6656 \Hy@DisableOption{pdfpicktraybypdfsize}%
6657 \Hy@DisableOption{pdfprintpagerange}%
6658 \Hy@DisableOption{pdfnumcopies}%
6659 \Hy@DisableOption{pdfstartview}%
6660 \Hy@DisableOption{pdfstartpage}%
6661 \Hy@DisableOption{pdftoolbar}%
6662 \Hy@DisableOption{pdfmenubar}%
6663 \Hy@DisableOption{pdfwindowui}%
6664 \Hy@DisableOption{pdfitwindow}%
6665 \Hy@DisableOption{pdfcenterwindow}%
6666 \Hy@DisableOption{pdfdisplaydoctitle}%
6667 \Hy@DisableOption{pdfpagelayout}%
6668 \Hy@DisableOption{pdflang}%
6669 \Hy@DisableOption{baseurl}%
6670 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6671 \Hy@pdfstringfalse
6672 }

```

Ignore star from referencing macros:

```

6673 \LetLtxMacro\NoHy@OrgRef\ref
6674 \DeclareRobustCommand*{\ref}{%
6675   \ifstar\NoHy@OrgRef\NoHy@OrgRef
6676 }
6677 \LetLtxMacro\NoHy@OrgPageRef\pageref
6678 \DeclareRobustCommand*{\pageref}{%
6679   \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6680 }

```

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.

```

6681 \def\NoHyper{%
6682   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6683   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6684   \global\let\hyper@livelink\hyper@link
6685   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6686   \let\hyper@anchor\ltx@gobble
6687   \let\hyper@anchorstart\ltx@gobble
6688   \def\hyper@anchorend{\Hy@xspace@end}%
6689   \let\hyper@linkstart\ltx@gobbletwo
6690   \def\hyper@linkend{\Hy@xspace@end}%
6691   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%

```

```

6692 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6693 \let\Hy@backout\@gobble
6694 }
6695 \def\stop@hyper{%
6696 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6697 \let\Hy@backout\@gobble
6698 \let\hyper@@anchor\ltx@gobble
6699 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6700 \let\hyper@anchor\ltx@gobble
6701 \let\hyper@anchorstart\ltx@gobble
6702 \def\hyper@anchorend{\Hy@xspace@end}%
6703 \let\hyper@linkstart\ltx@gobbletwo
6704 \def\hyper@linkend{\Hy@xspace@end}%
6705 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6706 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6707 }
6708 \def\endNoHyper{%
6709 \global\let\hyper@link\hyper@livelink
6710 }
6711 \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:

```

6712 \nohyperref
6713 \RequirePackage{letltxmacro}[2008/06/13]
6714 \let\hyper@@anchor\@gobble
6715 \def\hyper@link##1##2##3{##3}%
6716 \let\hyper@anchorstart\@gobble
6717 \let\hyper@anchorend\@empty
6718 \let\hyper@linkstart\@gobbletwo
6719 \let\hyper@linkend\@empty
6720 \def\hyper@linkurl##1##2{##1}%
6721 \def\hyper@linkfile##1##2##3{##1}%
6722 \def\hyper@link@{##1}##2##3{##3}%
6723 \let\PDF@SetupDoc\@empty
6724 \let\PDF@FinishDoc\@empty
6725 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6726 \def\Acrobatmenu#1##2{\leavevmode#2}
6727 \let\pdfstringdefDisableCommands\@gobbletwo
6728 \let\texorpdfstring\@firstoftwo
6729 \let\pdfbookmark\@undefined
6730 \newcommand\pdfbookmark[3]{}{}
6731 \let\phantomsection\@empty
6732 \let\hypersetup\@gobble
6733 \let\hyperbaseurl\@gobble
6734 \newcommand*{\href}[3]{}{##3}
6735 \let\hyperdef\@gobbletwo
6736 \let\hyperlink\@gobble

```

```

6737 \let\hypertarget\@gobble
6738 \def\hyperref{%
6739   \@ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6740 }
6741 \long\def\@gobbleopt[#1]{%
6742 \let\hyperpage\@empty
Ignore star from referencing macros:
6743 \LetLtxMacro\NoHy@OrgRef\ref
6744 \DeclareRobustCommand*{\ref}{%
6745   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6746 }
6747 \LetLtxMacro\NoHy@OrgPageRef\pageref
6748 \DeclareRobustCommand*{\pageref}{%
6749   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6750 }
6751 \</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}`

```

6752 \<*package>
6753 \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.

```

6754   \if@filesw
6755     \ifHy@typexml
6756       \immediate\closeout\@mainaux
6757       \immediate\openout\@mainaux\jobname.aux\relax
6758       \immediate\write\@auxout{<relaxxml>\relax}%
6759     \fi
6760     \immediate\write\@auxout{%
6761       \string\providecommand\string\HyperFirstAtBeginDocument{%
6762         \string\AtBeginDocument}^^J%
6763       \string\HyperFirstAtBeginDocument{%
6764         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6765         \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6766         \string\gdef\string\contentsline%
6767           \string#1\string#2\string#3\string#4{%
6768           \string\oldcontentsline%
6769           {\string#1}{\string#2}{\string#3}}^^J%
6770       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6771       \string\gdef\string\newlabel\string#1\string#2{%
6772       \string\newlabelxx{\string#1}\string#2}^^J%
6773       \string\gdef\string\newlabelxx%
6774         \string#1\string#2\string#3\string#4\string#5\string#6{%
6775         \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.

```

6776     \string\AtEndDocument{%
6777       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6778       \string\let\string\contentsline\string\oldcontentsline^^J%

```

```

6779      \string\let\string\newlabel\string\oldnewlabel^^J%
6780      \string\fi%
6781      }^^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.

```

6782      \string\fi%
6783      }^^J%
6784      \string\global\string\let\string\hyper@last\relax^^J%
6785      \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6786      }%
6787      \fi
6788      \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.

```

6789      \ifx\hyper@last\@undefined
6790      \def\@starttoc#1{%
6791      \begingroup
6792      \makeatletter
6793      \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6794      \IfFileExists{\jobname.#1}{%
6795      \Hy@WarningNoLine{%
6796      old #1 file detected, not used; run LaTeX again%
6797      }%
6798      }{}%
6799      \if@filesw
6800      \expandafter\newwrite\csname tf@#1\endcsname
6801      \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6802      \fi
6803      \@nobreakfalse
6804      \endgroup
6805      }%
6806      \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}}}%
6807      \fi
6808      }

```

26 Title strings

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

```

6809 \ifHy@pdfusetitle
6810 \let\HyOrg@title\title
6811 \let\HyOrg@author\author
6812 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6813 \def\Hy@scanopttitle[#1]{%
6814 \gdef\Hy@title{#1}%
6815 \HyOrg@title[{#1}]%
6816 }%
6817 \def\Hy@scantitle#1{%
6818 \gdef\Hy@title{#1}%
6819 \HyOrg@title{#1}%
6820 }%

```

```

6821 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6822 \def\Hy@scanoptauthor[#1]{%
6823   \gdef\Hy@author{#1}%
6824   \HyOrg@author[#{1}]%
6825 }%
6826 \def\Hy@scanauthor#1{%
6827   \gdef\Hy@author{#1}%
6828   \HyOrg@author{#1}%
6829 }%

```

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

```

6830 \begingroup
6831   \def\process@me#1\@nil#2{%
6832     \expandafter\let\expandafter\x\csname @#2\endcsname
6833     \edef\y{\expandafter\strip@prefix\meaning\x}%
6834     \def\c##1#1##2\@nil{%
6835       \ifx\\##1\\%
6836       \else
6837         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6838         \expandafter{x}%
6839       \fi
6840     }%
6841     \expandafter\c\y\relax#1\@nil
6842   }%
6843   \expandafter\process@me\string\@latex@\@nil{title}%
6844   \expandafter\process@me\string\@latex@\@nil{author}%
6845 \endgroup
6846 \fi
6847 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\\` in the title string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

A possible ¹removes its argument.

```

6848 \def\Hy@UseMaketitleString#1{%
6849   \ltx@ifundefined{Hy@#1}{-}{%
6850     \begingroup
6851       \let\Hy@saved@hook\pdfstringdefPreHook
6852       \pdfstringdefDisableCommands{%
6853         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6854         \let\newline\\%
6855         \def\and{; }%
6856         \let\thanks\@gobble%
6857       }%
6858       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6859         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6860           \csname Hy@#1\endcsname\@empty
6861         }%
6862       \fi

```

```

6863 \global\let\pdfstringdefPreHook\Hy@saved@hook
6864 \endgroup
6865 }%
6866 }
6867 \def\Hy@newline@title#1{ #1}
6868 \def\Hy@newline@author#1{, #1}
6869 \def\Hy@UseMaketitleInfos{%
6870 \Hy@UseMaketitleString{title}%
6871 \Hy@UseMaketitleString{author}%
6872 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6873 \RequirePackage{atbegshi}[2007/09/09]
6874 \let\Hy@EveryPageHook\ltx@empty
6875 \let\Hy@EveryPageBoxHook\ltx@empty
6876 \let\Hy@FirstPageHook\ltx@empty
6877 \AtBeginShipout{%
6878 \Hy@EveryPageHook
6879 \ifx\Hy@EveryPageBoxHook\ltx@empty
6880 \else
6881 \setbox\AtBeginShipoutBox=\vbox{%
6882 \offinterlineskip
6883 \Hy@EveryPageBoxHook
6884 \box\AtBeginShipoutBox
6885 }%
6886 \fi
6887 }
6888 \ltx@iffileloaded{hpdfetex.def}{%
6889 \AtBeginShipout{%
6890 \Hy@FirstPageHook
6891 \global\let\Hy@FirstPageHook\ltx@empty
6892 }%
6893 }{%
6894 \AtBeginShipoutFirst{%
6895 \Hy@FirstPageHook
6896 }%
6897 }
6898 \g@addto@macro\Hy@FirstPageHook{%
6899 \PDF@FinishDoc
6900 \global\let\PDF@FinishDoc\ltx@empty
6901 }

```

28.1 PDF /PageLabels

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

```

6902 \ifHy@pdfpagelabels
6903 \begingroup\expandafter\expandafter\expandafter\endgroup
6904 \expandafter\ifx\curname thepage\endcsname\relax
6905 \Hy@pdfpagelabelsfalse
6906 \Hy@WarningNoLine{%
6907 Option `pdfpagelabels' is turned off\MessageBreak

```

```

6908     because \string\thepage\space is undefined%
6909   }%
6910   \csname fi\endcsname
6911   \csname iffalse\expandafter\endcsname
6912 \fi

```

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

```

6913 \def\thispdfpagelabel#1{%
6914   \gdef\HyPL@thisLabel{#1}%
6915 }%
6916 \global\let\HyPL@thisLabel\relax

```

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

```

6917 \let\HyPL@Labels\ltx@empty

```

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

```

6918 \newcount\Hy@abspage
6919 \Hy@abspage=0 %

```

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

```

6920 \def\HyPL@LastType{init}%
6921 \def\HyPL@LastNumber{0}%
6922 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6923 \def\HyPL@arabic{D}%
6924 \def\HyPL@Roman{R}%
6925 \def\HyPL@roman{r}%
6926 \def\HyPL@Alph{A}%
6927 \def\HyPL@alph{a}%

6928 \let\HyPL@SlidesSetPage\ltx@empty
6929 \ltx@ifclassloaded{slides}{%
6930   \def\HyPL@SlidesSetPage{%
6931     \advance\c@page\ltx@one
6932     \ifnum\value{page}>\ltx@one
6933       \protected@edef\HyPL@SlidesOptionalPage{%
6934         \Hy@SlidesFormatOptionalPage{\thepage}%
6935       }%
6936     \else
6937       \let\HyPL@SlidesOptionalPage\ltx@empty
6938     \fi
6939     \advance\c@page-\ltx@one
6940     \def\HyPL@page{%
6941       \csname the\Hy@SlidesPage\endcsname
6942       \HyPL@SlidesOptionalPage
6943     }%
6944   }%
6945 }{}%

```

`\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.

```

6946 \def\HyPL@EveryPage{%
6947   \begingroup
6948   \ifx\HyPL@thisLabel\relax

```

```

6949 \let\HyPL@page\thepage
6950 \HyPL@SlidesSetPage
6951 \else
6952 \let\HyPL@page\HyPL@thisLabel
6953 \global\let\HyPL@thisLabel\relax
6954 \fi
6955 \let\HyPL@Type\relax
6956 \ifnum\c@page>0 %
6957 \ifx\HyPL@SlidesSetPage\ltx@empty
6958 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6959 \fi
6960 \fi
6961 \let\Hy@temp Y%
6962 \ifx\HyPL@Type\HyPL@LastType
6963 \else
6964 \let\Hy@temp N%
6965 \fi
6966 \ifx\HyPL@Type\relax
6967 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6968 \else
6969 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6970 \fi
6971 \ifx\HyPL@Prefix\HyPL@LastPrefix
6972 \else
6973 \let\Hy@temp N%
6974 \fi
6975 \if Y\Hy@temp
6976 \advance\c@page by -1 %
6977 \ifnum\HyPL@LastNumber=\the\c@page\relax
6978 \else
6979 \let\Hy@temp N%
6980 \fi
6981 \Hy@StepCount\c@page
6982 \fi
6983 \if N\Hy@temp
6984 \ifx\HyPL@Type\relax
6985 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6986 \else
6987 \HyPL@StorePageLabel{%
6988 \ifx\HyPL@Prefix\@empty
6989 \else
6990 /P(\HyPL@Prefix)%
6991 \fi
6992 /S/\csname HyPL\HyPL@Type\endcsname
6993 \ifnum\the\c@page=1 %
6994 \else
6995 \space/St \the\c@page
6996 \fi
6997 }%
6998 \fi
6999 \fi
7000 \xdef\HyPL@LastNumber{\the\c@page}%
7001 \global\let\HyPL@LastType\HyPL@Type
7002 \global\let\HyPL@LastPrefix\HyPL@Prefix
7003 \endgroup
7004 \Hy@GlobalStepCount\Hy@abspage
7005 }%

```


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

```

7006 \def\HyPL@CheckThePage#1\@nil{%
7007   \HyPL@@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
7008 }%
```

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

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

```

7009 \def\HyPL@@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
7010   \def\Hy@tempa{#4}%
7011   \def\Hy@tempb{\csname\endcsname\c@page}%
7012   \ifx\Hy@tempa\Hy@tempb
7013     \expandafter\ifx\csname HyPL#3\endcsname\relax
7014     \else
7015       \def\HyPL@Type{#3}%
7016       \def\HyPL@Prefix{#2}%
7017       \fi
7018     \else
7019       \begingroup
7020       \let\Hy@next\endgroup
7021       \let\HyPL@found\@undefined
7022       \def\arabic{\HyPL@Format{arabic}}%
7023       \def\Roman{\HyPL@Format{Roman}}%
7024       \def\roman{\HyPL@Format{roman}}%
7025       \def\Alph{\HyPL@Format{Alph}}%
7026       \def\alph{\HyPL@Format{alph}}%
7027       \protected@edef\Hy@temp{#1}%
7028       \ifx\HyPL@found\relax
7029         \toks@{\expandafter{\Hy@temp}}%
7030         \edef\Hy@next{\endgroup
7031           \noexpand\HyPL@@@CheckThePage\the\toks@
7032           \noexpand\HyPL@found\relax\noexpand\@nil
7033         }%
7034       \fi
7035       \Hy@next
7036     \fi
7037 }%
```

`\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`.

```

7038 \def\HyPL@Format#1#2{%
7039   \ifx\HyPL@found\@undefined
7040     \expandafter\ifx\csname c@#2\endcsname\c@page
7041       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7042     \else
7043       \expandafter\noexpand\csname#1\endcsname{#2}%
7044     \fi
7045   \else
7046     \expandafter\noexpand\csname#1\endcsname{#2}%
7047   \fi
7048 }%
```

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

```

7049 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7050   \def\Hy@tempa{#3}%
7051   \def\Hy@tempb{\HyPL@found\relax}%
7052   \ifx\Hy@tempa\Hy@tempb
7053     \def\HyPL@Type{#2}%
7054     \def\HyPL@Prefix{#1}%
7055   \fi
7056 }%

```

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

```

7057 \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`.

```

7058 \def\HyPL@Useless{0<</S/D>>}%
7059 \@onelevel@sanitize\HyPL@Useless

```

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

```

7060 \def\HyPL@SetPageLabels{%
7061   \@onelevel@sanitize\HyPL@Labels
7062   \ifx\HyPL@Labels\@empty
7063     \else
7064     \ifx\HyPL@Labels\HyPL@Useless
7065     \else
7066       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7067     \fi
7068   \fi
7069 }%

```

```

7070 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7071 \fi

```

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

```

7072 \Hy@DisableOption{pdfpagelabels}
7073 </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`

```

7074 <{*pdfTeX}>
7075 \pdf@ifdraftmode{%
7076   \let\Hy@PutCatalog\ltx@gobble
7077 }{%
7078   \let\Hy@PutCatalog\pdfcatalog
7079 }
7080 </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.

```

7081 \< *vtex>
7082 \providecommand*\XR@ext}{pdf}
7083 \edef\Hy@VTeXversion{%
7084   \ifx\VTeXversion\undefined
7085     \z@
7086   \else
7087     \ifx\VTeXversion\relax
7088       \z@
7089     \else
7090       \VTeXversion
7091     \fi
7092   \fi
7093 }
7094 \begingroup
7095   \ifnum\Hy@VTeXversion<660 %
7096     \gdef\Hy@PutCatalog#1{%
7097       \Hy@WarningNoLine{%
7098         VTeX 6.59g or above required for pdfpagelabels%
7099       }%
7100     }%
7101   \else
7102     \gdef\Hy@PutCatalog#1{%
7103       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7104     }%
7105     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7106       \ifx\#2\%
7107         \else
7108           \immediate\special{!pdfpagelabels #2}%
7109         \fi
7110       }%
7111     \fi
7112 \endgroup
7113 \< /vtex>

7114 \< *pdftex | vtex>

```

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

```

7115 \ifHy@pdfpagelabels
7116   \def\HyPL@StorePageLabel#1{%
7117     \toks@ \expandafter{\HyPL@Labels}%
7118     \xdef\HyPL@Labels{%
7119       \the\toks@
7120       \the\Hy@abspace<<#1>>%
7121     }%
7122   }%

```

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.

```

7123 \RequirePackage{atveryend}[2009/12/07]%
7124 \AtVeryEndDocument{%
7125   \HyPL@SetPageLabels
7126 }%

7127 \fi
7128 \< /pdftex | vtex>

```

28.1.2 xetex

```
7129 ⟨*xetex⟩
7130 \HyPsd@LoadUnicode
7131 \Hy@unicodetrue
7132 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7133 \else
7134 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7135 \fi
7136 \HyPsd@LoadStringEncoding
7137 \define@key{Hyp}{unicode}[true]{%
7138 \Hy@boolkey{unicode}{#1}%
7139 \ifHy@unicode
7140 \else
7141 \Hy@Warning{%
7142 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7143 option setting `unicode=false'%
7144 }%
7145 \Hy@unicodetrue
7146 \fi
7147 }
7148 \define@key{Hyp}{pdfencoding}{%
7149 \edef\HyPsd@temp{#1}%
7150 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7151 \let\HyPsd@pdfencoding\HyPsd@temp
7152 \else
7153 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7154 \let\HyPsd@pdfencoding\HyPsd@temp
7155 \else
7156 \Hy@Warning{%
7157 XeTeX driver only supports\MessageBreak
7158 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7159 setting `pdfencoding=\HyPsd@temp'%
7160 }%
7161 \fi
7162 \fi
7163 }
7164 \let\HyXeTeX@CheckUnicode\relax
```

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

So let's make use of it:

```
7165 \def\setpdfinkmargin#1{%
7166 \begingroup
7167 \setlength{\dimen@}{#1}%
7168 \special{dvipdfmx:config g \strip@pt\dimen@}%
7169 \endgroup}
7170 ⟨/xetex⟩
```

28.1.3 pdfmarkbase, dvipdfm, xetex

```
7171 ⟨*pdfmarkbase⟩
7172 \begingroup
7173 \@ifundefined{headerps@out}{}{%
7174 \toks@{\expandafter{\Hy@FirstPageHook}%
7175 \xdef\Hy@FirstPageHook{%
7176 \noexpand\headerps@out{%
7177 systemdict /pdfmark known%
7178 {%
7179 userdict /?pdfmark systemdict /exec get put%
```

```

7180     }{%
7181     userdict /?pdfmark systemdict /pop get put %
7182     userdict /pdfmark systemdict /cleartomark get put%
7183     }%
7184     ifelse%
7185     }%
7186     \the\toks@
7187     }%
7188     }%
7189 \endgroup
7190 </pdfmarkbase>

```

\Hy@PutCatalog

```

7191 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
7192 <*pdfmarkbase>
7193 \def\Hy@PutCatalog#1{%
7194   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7195 }
7196 </pdfmarkbase>

7197 <*pdfmarkbase | dvipdfm | xetex>
7198 \ifHy@pdfpagelabels

```

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

```

7199 \def\HyPL@StorePageLabel#1{%
7200   \if@filesw
7201     \begingroup
7202     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7203     \immediate\write\@mainaux{%
7204       \string\HyPL@Entry{\Hy@tempa}%
7205     }%
7206     \endgroup
7207   \fi
7208 }%

```

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.

```

7209 \Hy@AtBeginDocument{%
7210   \if@filesw
7211     \immediate\write\@mainaux{%
7212       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7213     }%
7214   \fi
7215   \ifx\HyPL@Labels\@empty
7216     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7217   \else
7218     \HyPL@SetPageLabels
7219   \fi
7220   \let\HyPL@Entry\@gobble
7221 }%

```

\HyPL@Entry

```

7222 \def\HyPL@Entry#1{%
7223   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7224     \HyPL@Labels
7225     #1%

```

```

7226 }%
7227 }%

7228 \fi
7229 </pdfmarkbase | dvipdfm | xetex>

7230 <*package>

7231 \ifx\MaybeStopEarly\relax
7232 \else
7233 \Hy@stoppedearlytrue
7234 \expandafter\MaybeStopEarly
7235 \fi
7236 \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

```

7237 \def\Hy@CounterExists#1{%
7238 \begingroup\expandafter\expandafter\expandafter\endgroup
7239 \expandafter\ifx\csname c@#1\endcsname\relax
7240 \expandafter\@gobble
7241 \else
7242 \begingroup\expandafter\expandafter\expandafter\endgroup
7243 \expandafter\ifx\csname the#1\endcsname\relax
7244 \expandafter\expandafter\expandafter\@gobble
7245 \else
7246 \expandafter\expandafter\expandafter\@firstofone
7247 \fi
7248 \fi
7249 }
7250 \Hy@CounterExists{section}{%
7251 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7252 }
7253 \Hy@CounterExists{part}{%
7254 \providecommand\theHpart{\arabic{part}}}%
7255 }
7256 \ltx@ifundefined{thechapter}{%
7257 \providecommand\theHsection {\arabic{section}}}%

```

```

7258 \providecommand\theHfigure    {\arabic{figure}}}%
7259 \providecommand\theHtable     {\arabic{table}}}%
7260 }{%
7261 \providecommand\theHchapter    {\arabic{chapter}}}%
7262 \providecommand\theHfigure     {\theHchapter.\arabic{figure}}}%
7263 \providecommand\theHtable      {\theHchapter.\arabic{table}}}%
7264 \providecommand\theHsection    {\theHchapter.\arabic{section}}}%
7265 }
7266 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7267 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7268 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
7269 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7270 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
7271 \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.

```

7272 \let\H@item\item
7273 \newcounter{Item}
7274 \def\theHItem{\arabic{Item}}
7275 \def\item{%
7276   \@hyper@itemfalse
7277   \if@nmbrrlist\@hyper@itemtrue\fi
7278   \H@item
7279 }
7280 \providecommand\theHenumi      {\theHItem}
7281 \providecommand\theHenumii     {\theHItem}
7282 \providecommand\theHenumiii    {\theHItem}
7283 \providecommand\theHenumiv     {\theHItem}
7284 \providecommand\theHHfootnote  {\arabic{Hfootnote}}
7285 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7286 \@ifundefined{theHHmpfootnote}{%
7287   \let\theHHmpfootnote\theHHfootnote
7288 }{}

```

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.

```

7289 \let\H@refstepcounter\refstepcounter
7290 \edef\name@of@eq{equation}%
7291 \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.

```

7292 \newif\if@hyper@item
7293 \newif\if@skiphyperref
7294 \@hyper@itemfalse
7295 \@skiphyperreffalse
7296 \def\refstepcounter#1{%
7297   \ifHy@pdfstring
7298   \else
7299     \H@refstepcounter{#1}%
7300     \edef\This@name{#1}%
7301     \ifx\This@name\name@of@slide
7302       \else
7303         \if@skiphyperref

```

```

7304 \else
7305 \if@hyper@item
7306 \stepcounter{Item}%
7307 \hyper@refstepcounter{Item}%
7308 \@hyper@itemfalse
7309 \else
7310 \hyper@refstepcounter{#1}%
7311 \fi
7312 \fi
7313 \fi
7314 \fi
7315 }
7316 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS \LaTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

7317 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7318 \def\hyper@refstepcounter#1{%
7319 \edef\This@name{#1}%
7320 \ifx\This@name\name@of@eq
7321 \@ifundefined{theHequation}{%
7322 \make@stripped@name{\theequation}%
7323 \let\theHequation\newname
7324 }{}%
7325 \fi
7326 \HyCnt@ProvideTheHCounter{#1}%
7327 \hyper@makecurrent{#1}%
7328 \ifmeasuring@
7329 \else
7330 \Hy@raisedlink{%
7331 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7332 }%
7333 \fi
7334 }

```

`\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.

```

7335 \def\HyCnt@ProvideTheHCounter#1{%
7336 \@ifundefined{theH#1}{%
7337 \expandafter\def\csname theH#1\endcsname{}%
7338 \def\Hy@temp{\@elt{#1}}%
7339 \ltx@onelevel@sanitize\Hy@temp
7340 \let\HyOrg@elt\@elt
7341 \edef\@elt{%
7342 \noexpand\HyCnt@LookForParentCounter
7343 \expandafter\noexpand\csname theH#1\endcsname
7344 }%
7345 \cl@ckpt
7346 \let\@elt\HyOrg@elt

```



```

7347 \expandafter
7348 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7349 \expandafter{%
7350 \expandafter\@arabic\csname c@#1\endcsname
7351 }%
7352 }{}%
7353 }

```

\Hy@LookForParentCounter

```

7354 \def\HyCnt@LookForParentCounter#1#2{%
7355 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7356 \ltx@ifundefined{cl@#2}{%
7357 }{%
7358 \ltx@onelevel@sanitize\Hy@temp@A
7359 \edef\Hy@temp@A{%
7360 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7361 }\Hy@temp@A
7362 \ifn@
7363 \ltx@ifundefined{theH#2}{%
7364 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7365 \expandafter{%
7366 \expandafter\@arabic\csname c@#2\endcsname.%
7367 }%
7368 }{%
7369 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7370 \expandafter{%
7371 \csname theH#2\endcsname.%
7372 }%
7373 }%
7374 \fi
7375 }%
7376 }

```

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`.

```

7377 \begingroup\expandafter\expandafter\expandafter\endgroup
7378 \expandafter\ifx\csname chapter\endcsname\relax
7379 \def\Hy@chapterstring{section}%
7380 \else
7381 \def\Hy@chapterstring{chapter}%
7382 \fi
7383 \def\Hy@appendixstring{appendix}
7384 \def\Hy@chapapp{\Hy@chapterstring}
7385 \ltx@ifundefined{appendix}{%
7386 }{%
7387 \let\HyOrg@appendix\appendix
7388 \def\Hy@AlphNoErr#1{%
7389 \ifnum\value{#1}>26 %
7390 Alph\number\value{#1}%
7391 \else
7392 \ifnum\value{#1}<1 %
7393 Alph\number\value{#1}%
7394 \else

```

```

7395     \Alph{#1}%
7396     \fi
7397   \fi
7398 }%
7399 \def\appendix{%
7400   \ltx@ifundefined{chapter}{%
7401     \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7402   }{%
7403     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7404   }%
7405   \xdef\Hy@chapapp{\Hy@appendixstring}%
7406   \HyOrg@appendix
7407 }%
7408 }

```

\Hy@Test@alph

```

7409 \def\Hy@Test@alph#1{%
7410   \ifcase#1\or
7411     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7412     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7413     u\or v\or w\or x\or y\or z%
7414   \else
7415     \@ctrerr
7416   \fi
7417 }

```

\Hy@Test@Alph

```

7418 \def\Hy@Test@Alph#1{%
7419   \ifcase#1\or
7420     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7421     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7422     U\or V\or W\or X\or Y\or Z%
7423   \else
7424     \@ctrerr
7425   \fi
7426 }

```

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

```

7427 \def\hyper@makecurrent#1{%
7428   \begingroup
7429   \Hy@safe@activestruer
7430   \edef\Hy@param{#1}%
7431   \ifx\Hy@param\Hy@chapterstring
7432     \let\Hy@param\Hy@chapapp
7433   \fi
7434   \ifHy@hypertextnames
7435     \let\@number\@firstofone
7436     \def\@fnsymbol##1{fnsymbol\number##1}%
7437     \def\@arabic##1{\number##1}%
7438     \ifx\@alph\Hy@Test@alph
7439     \else
7440       \def\@alph{alph\number}%
7441     \fi
7442     \ifx\@Alph\Hy@Test@Alph
7443     \else
7444       \def\@Alph{Alph\number}%

```

```

7445 \fi
7446 \ifHy@naturalnames
7447 \let\textlatin\@firstofone
7448 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7449 \else
7450 \xdef\HyperGlobalCurrentHref{%
7451 \csname
7452 the%
7453 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7454 #1%
7455 \endcsname
7456 }%
7457 \fi
7458 \xdef\HyperGlobalCurrentHref{%
7459 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7460 }%
7461 \else
7462 \Hy@GlobalStepCount\Hy@linkcounter
7463 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7464 \fi
7465 \endgroup
7466 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7467 \ifHy@localanchorname
7468 \let\@currentHref\HyperLocalCurrentHref
7469 \else
7470 \global\let\@currentHref\HyperGlobalCurrentHref
7471 \fi
7472 }

```

\Hy@MakeCurrentHref

```

7473 \def\Hy@MakeCurrentHref#1{%
7474 \edef\HyperLocalCurrentHref{#1}%
7475 \@onelevel@sanitize\HyperLocalCurrentHref
7476 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7477 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7478 \ifHy@localanchorname
7479 \let\@currentHref\HyperLocalCurrentHref
7480 \else
7481 \global\let\@currentHref\HyperGlobalCurrentHref
7482 \fi
7483 }

```

\Hy@MakeCurrentHrefAuto

```

7484 \def\Hy@MakeCurrentHrefAuto#1{%
7485 \Hy@GlobalStepCount\Hy@linkcounter
7486 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7487 }

```

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

```

7488 \def\@currentHlabel{\@currentHref}

7489 \@ifpackageloaded{fancyvrb}{%
7490 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
7491 \def\FV@StepLineNo{%
7492 \FV@SetLineNo
7493 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7494 \FV@StepLineNo

```

```

7495 }%
7496 }%
7497 }{}

```

30 Package lastpage support

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

`\lastpage@putlabel`

```

7498 \Hy@AtBeginDocument{%
7499   \@ifclassloaded{revtex4}{%
7500     \@namedef{ver@lastpage.sty}{1994/06/25}%
7501   }{}%
7502   \@ifpackageloaded{lastpage}{%
7503     \ifHy@pageanchor
7504     \else
7505       \Hy@WarningNoLine{%
7506         The \string\pageref{LastPage} link doesn't work\MessageBreak
7507         with disabled option `pageanchor'%
7508       }%
7509     \fi
7510     \def\lastpage@putlabel{%
7511       \addtocounter{page}{-1}%
7512       \if@filesw
7513         \begingroup
7514           \let\@number\@firstofone
7515           \ifHy@pageanchor
7516             \ifHy@hypertextnames
7517               \ifHy@plainpages
7518                 \def\Hy@temp{\arabic{page}}%
7519               \else
7520                 \Hy@unicodefalse
7521                 \pdfstringdef\Hy@temp{\thepage}%
7522               \fi
7523             \else
7524               \def\Hy@temp{\the\Hy@pagecounter}%
7525             \fi
7526           \fi
7527           \immediate\write\@auxout{%
7528             \string\newlabel
7529             {LastPage}{}{\thepage}{}{%
7530               \ifHy@pageanchor page.\Hy@temp\fi}{}%
7531             }%
7532           \endgroup
7533         \fi
7534       \addtocounter{page}{1}%
7535     }%
7536   \@ifclassloaded{revtex4}{%
7537     \begingroup
7538     \toks@\expandafter{\lastpage@putlabel}%

```

```

7539 \edef\x{\endgroup
7540 \def\noexpand\lastpage@putlabel{%
7541 \noexpand\stepcounter{page}%
7542 \the\toks@
7543 \noexpand\addtocounter{page}\noexpand\m@ne
7544 }%
7545 }%
7546 \x
7547 }{}%
7548 }{}%
7549 }
7550 \</package>
7551 \<*check>
7552 \checkpackage{lastpage}[1994/06/25]
7553 \checkcommand\def\lastpage@putlabel{%
7554 \addtocounter{page}{-1}%
7555 \immediate\write\@auxout{%
7556 \string\newlabel{LastPage}{\the\thepage}}%
7557 }%
7558 \addtocounter{page}{1}%
7559 }
7560 \</check>
7561 \<*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.

```

7562 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
7563 \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:

```

7564 \@ifpackageloaded{titlesec}{%
7565 \def\ttl@Hy@steplink#1{%
7566 \Hy@MakeCurrentHrefAuto{#1*}%
7567 \edef\ttl@Hy@saveanchor{%
7568 \noexpand\Hy@raisedlink{%
7569 \noexpand\hyper@anchorstart{\@currentHref}%
7570 \noexpand\hyper@anchorend
7571 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7572 \noexpand\ttl@Hy@PatchSaveWrite
7573 }%
7574 }%
7575 }%
7576 \def\ttl@Hy@PatchSaveWrite{%
7577 \begingroup
7578 \toks@\expandafter{\ttl@savewrite}%
7579 \edef\x{\endgroup
7580 \def\noexpand\ttl@savewrite{%
7581 \let\noexpand\@currentHref
7582 \noexpand\ttl@Hy@SavedCurrentHref

```

```

7583     \the\toks@
7584     }%
7585     }%
7586     \x
7587     }%
7588     \def\ttl@Hy@refstepcounter#1{%
7589       \let\ttl@b\Hy@raisedlink
7590       \def\Hy@raisedlink##1{%
7591         \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7592       }%
7593       \refstepcounter{#1}%
7594       \let\Hy@raisedlink\ttl@b
7595     }%
7596   }{}

```

Package titletoc support:

```

7597 \@ifpackageloaded{titletoc}{%
7598   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7599 }{}

```

33 Package varioref support

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

```

7600 \AtBeginDocument{%
7601   \def\Hy@varioref@undefined{{??}{??}{}}{}{}
7602   \@ifpackageloaded{varioref}{%
7603     \def\vref@pagenum#1#2{%
7604       \@ifundefined{r@#2}{%
7605         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7606       }{}%
7607       \edef#1{\getpagerefnumber{#2}}%
7608     }%
7609   }{}

```

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

```

7610 \def\Hy@varioref@refstepcounter#1{%
7611   \stepcounter{#1}%
7612   \protected@edef\@currentlabel{%
7613     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7614   }%
7615 }
7616 \ifx\refstepcounter\Hy@varioref@refstepcounter
7617   \let\H@refstepcounter\refstepcounter
7618   \let\refstepcounter\Hy@saved@refstepcounter
7619 \fi
7620 }

```

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

```

7621 \ifpackageloaded{longtable}{%
7622   \begingroup
7623   \def\y{\LT@array}%
7624   \@ifundefined{scr@LT@array}{%
7625     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7626     }\def\y{\scr@LT@array}}%
7627   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7628     \expandafter\endgroup
7629     \expandafter\def\y[#1]#2{%
7630       \H@refstepcounter{#1}%
7631       \hyper@makecurrent{table}%
7632       \let\Hy@LT@currentHref\@currentHref
7633       #2\@sharp#3#4%
7634     }%
7635   }%
7636   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7637 \begingroup
7638 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7639   \endgroup
7640   \def\LT@start{%
7641     #1%
7642     \ifvoid\LT@foot#2\fi
7643     \let\@currentHref\Hy@LT@currentHref
7644     \Hy@raisedlink{%
7645       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7646     }%
7647     #3%
7648   }%
7649 }%
7650 \expandafter\x\LT@start\@nil
7651 }{}

```

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.

```

7652 \let\new@refstepcounter\refstepcounter
7653 \let\H@equation\equation
7654 \let\H@endequation\endequation
7655 \@ifpackageloaded{amsmath}{%
7656   \long\def\Hy@temp{%
7657     \incr@eqnum
7658     \mathdisplay@push
7659     \st@rredfalse \global\@eqnswtrue
7660     \mathdisplay{equation}%
7661   }%
7662   \ifx\Hy@temp\equation
7663     \expandafter\ifx\csname if@fleqn\expandafter\endcsname

```

```

7664         \csname iftrue\endcsname
7665     \else
7666         \long\def\equation{%
7667             \mathdisplay@push
7668             \st@rredfalse \global\@eqnswtrue
7669             \mathdisplay{equation}%
7670             \incr@eqnum
7671         }%
7672     \fi
7673 \fi
7674 }{%
7675 \def\equation{%
7676     \let\refstepcounter\H@refstepcounter
7677     \H@equation
7678     \@ifundefined{theHequation}{%
7679         \make@stripped@name{\theequation}%
7680         \let\theHequation\newname
7681     }{}%
7682     \hyper@makecurrent{equation}%

```

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

```

7683     \mathopen{%
7684         \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7685     }%
7686     \let\refstepcounter\new@refstepcounter
7687 }%
7688 \def\endequation{%
7689     \ifx\Hy@raisedlink\lt@empty
7690         \hyper@anchorend
7691     \else
7692         \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7693     \fi
7694     \H@endequation
7695 }%
7696 }

```

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.

```

7697 \newif\if@eqnstar
7698 \@eqnstarfalse
7699 \let\H@eqnarray\eqnarray
7700 \let\H@endeqnarray\endeqnarray
7701 \def\eqnarray{%
7702     \let\Hy@reserved@a\relax
7703     \def\@currentHref{}%
7704     \H@eqnarray
7705     \if@eqnstar
7706     \else
7707         \ifx\\\@currentHref\\%
7708         \else
7709             \@ifundefined{theHequation}{%
7710                 \make@stripped@name{\theequation}%
7711                 \let\theHequation\newname
7712             }{}%
7713             \hyper@makecurrent{equation}%

```



```

7714 \mathopen{%
7715 \Hy@raisedlink{%
7716 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7717 }%
7718 }%
7719 \fi
7720 \fi
7721 }
7722 \def\endeqnarray{%
7723 \H@endeqnarray
7724 }

```

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.

```

7725 \@namedef{eqnarray*}{%
7726 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7727 }
7728 \@namedef{endeqnarray*}{%
7729 \nonumber\endeqnarray\@eqnstarfalse
7730 }

```

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

```

7731 \ltx@ifundefined{subeqnarray}{}{%
7732 \let\H@subeqnarray\subeqnarray
7733 \let\H@endsubeqnarray\endsubeqnarray
7734 \def\subeqnarray{%
7735 \let\Hy@reserved@a\relax
7736 \H@subeqnarray
7737 \@ifundefined{theHequation}{%
7738 \make@stripped@name{\theequation}%
7739 \let\theHequation\newname
7740 }{}%
7741 \hyper@makecurrent{equation}%
7742 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7743 }%
7744 \def\endsubeqnarray{%
7745 \H@endsubeqnarray
7746 }%
7747 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7748 }

```

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

```

7749 \def\make@stripped@name#1{%
7750 \begingroup
7751 \escapechar\m@ne
7752 \global\let\newname\@empty
7753 \protected@edef\Hy@tempa{#1}%
7754 \edef\@tempb{%
7755 \noexpand\@tfor\noexpand\Hy@tempa:=%
7756 \expandafter\strip@prefix\meaning\Hy@tempa
7757 }%
7758 \@tempb\do{%
7759 \if\Hy@tempa\else
7760 \if\Hy@tempa\else
7761 \xdef\newname{\newname\Hy@tempa}%

```

```

7762     \fi
7763     \fi
7764   }%
7765 \endgroup
7766 }

```

Support for amsmath's subequations:

```

7767 \begingroup\expandafter\expandafter\expandafter\endgroup
7768 \expandafter\ifx\csname subequations\endcsname\relax
7769 \else
7770   \let\HyOrg@subequations\subequations
7771   \def\subequations{%
7772     \stepcounter{equation}%
7773     \protected@edef\theHparentequation{%
7774       \@ifundefined{theHequation}\theequation\theHequation
7775     }%
7776     \addtocounter{equation}{-1}%
7777     \HyOrg@subequations
7778     \def\theHequation{\theHparentequation\alph{equation}}%
7779     \ignorespaces
7780   }%
7781 \fi

```

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

```

7782 \Hy@AtBeginDocument{%
7783   \@ifpackageloaded{cleveref}{%
7784     \let\Hy@savedthm\@thm
7785     \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7786   }{%
7787     \@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\thm@indent
    \thm@headfont{\scshape}%\thm@headingfont\thm@smallcaps

7788 \def\Hy@temp#1#2#3{%
7789   \ifhmode\unskip\unskip\par\fi
7790   \normalfont
7791   \trivlist
7792   \let\thmheadnl\relax
7793   \let\thm@swap\@gobble
7794   \let\thm@indent\indent % indent
7795   \thm@headfont{\scshape}% heading font small caps
7796   \thm@notefont{\fontseries\mddefault\upshape}%
7797   \thm@headpunct{.}% add period after heading
7798   \thm@headsep 5p@ plus\p@ minus\p@\relax
7799   \thm@space@setup
7800   #1% style overrides
7801   \@topsep \thm@preskip % used by thm head
7802   \@topsepadd \thm@postskip % used by \@endparenv
7803   \def\@tempa{#2}\ifx\@empty\@tempa
7804     \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7805   \else
7806     \refstepcounter{#2}%
7807     \def\@tempa{%
7808       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7809   }%
7810 \fi

```

```

7811 \@tempa
7812 }%
7813 \ifx\Hy@temp\@thm
7814 \def\@thm#1#2#3{%
7815 \ifhmode
7816 \unskip\unskip\par
7817 \fi
7818 \normalfont
7819 \trivlist
7820 \let\thmheadnl\relax
7821 \let\thm@swap\@gobble
7822 \let\thm@indent\indent % indent
7823 \thm@headfont{\scshape}% heading font small caps
7824 \thm@notefont{\fontseries\mddefault\upshape}%
7825 \thm@headpunct{.}% add period after heading
7826 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7827 \thm@space@setup
7828 #1% style overrides
7829 \@topsep \thm@preskip % used by thm head
7830 \@topsepadd \thm@postskip % used by \@endparenv
7831 \def\dth@counter{#2}%
7832 \ifx\@empty\dth@counter
7833 \def\@tempa{%
7834 \@oparg{\@begintheorem{#3}-{}}[]%
7835 }%
7836 \else
7837 \H@refstepcounter{#2}%
7838 \hyper@makecurrent{#2}%
7839 \let\Hy@dth@currentHref\@currentHref
7840 \def\@tempa{%
7841 \@oparg{\@begintheorem{#3}-{\csname the#2\endcsname}}[]%
7842 }%
7843 \fi
7844 \@tempa
7845 }%
7846 \else
7847 \def\@thm#1#2#3{%
7848 \ifhmode
7849 \unskip\unskip\par
7850 \fi
7851 \normalfont
7852 \trivlist
7853 \let\thmheadnl\relax
7854 \let\thm@swap\@gobble
7855 \thm@notefont{\fontseries\mddefault\upshape}%
7856 \thm@headpunct{.}% add period after heading
7857 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7858 \thm@space@setup
7859 #1% style overrides
7860 \@topsep \thm@preskip % used by thm head
7861 \@topsepadd \thm@postskip % used by \@endparenv
7862 \def\dth@counter{#2}%
7863 \ifx\@empty\dth@counter
7864 \def\@tempa{%
7865 \@oparg{\@begintheorem{#3}-{}}[]%
7866 }%
7867 \else

```

```

7868 \H@refstepcounter{#2}%
7869 \hyper@makecurrent{#2}%
7870 \let\Hy@dth@currentHref\@currentHref
7871 \def\@tempa{%
7872 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7873 }%
7874 \fi
7875 \@tempa
7876 }%
7877 \fi
7878 \dth@everypar={%
7879 \@minipagefalse
7880 \global\@newlistfalse
7881 \@noparitemfalse
7882 \if@inlabel
7883 \global\@inlabelfalse
7884 \begingroup
7885 \setbox\z@\lastbox
7886 \ifvoid\z@
7887 \kern-\itemindent
7888 \fi
7889 \endgroup
7890 \ifx\@empty\dth@counter
7891 \else
7892 \Hy@raisedlink{%
7893 \hyper@anchorstart{%
7894 \ltx@ifundefined{Hy@dth@currentHref}%
7895 \@currentHref\Hy@dth@currentHref
7896 }\hyper@anchorend
7897 }%
7898 \fi
7899 \unhbox\@labels
7900 \fi
7901 \if@nobreak
7902 \@nobreakfalse \clubpenalty\@M
7903 \else
7904 \clubpenalty\@clubpenalty \everypar{}%
7905 \fi
7906 }%
7907 }%

```

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

```

7908 {%
7909 \let\Hy@savethm\@thm
7910 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7911 }%
7912 }%
7913 }

```

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.

```

7914 \ifHy@hyperfootnotes
7915   \newcounter{Hfootnote}%
7916   \let\H@@footnotetext\@footnotetext
7917   \let\H@@footnotemark\@footnotemark
7918   \def\@xfootnotenext[#1]{%
7919     \begingroup
7920       \csname c@\@mpfn\endcsname #1\relax
7921       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7922     \endgroup
7923     \ifx\@footnotetext\@mpfootnotetext
7924       \expandafter\H@@mpfootnotetext
7925     \else
7926       \expandafter\H@@footnotetext
7927     \fi
7928   }%
7929   \def\@xfootnotemark[#1]{%
7930     \begingroup
7931       \c@footnote #1\relax
7932       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7933     \endgroup
7934     \H@@footnotemark
7935   }%
7936   \let\H@@mpfootnotetext\@mpfootnotetext
7937   \long\def\@mpfootnotetext#1{%
7938     \H@@mpfootnotetext{%
7939       \ifHy@nesting
7940         \expandafter\ltx@firstoftwo
7941       \else
7942         \expandafter\ltx@secondoftwo
7943       \fi
7944       {%
7945         \expandafter\hyper@@anchor\expandafter{%
7946           \Hy@footnote@currentHref
7947         }\ignorespaces #1}%
7948     }{%
7949       \Hy@raisedlink{%
7950         \expandafter\hyper@@anchor\expandafter{%
7951           \Hy@footnote@currentHref
7952         }\relax}%
7953       }\ignorespaces #1%
7954     }%
7955   }%
7956 }%
7957 \long\def\@footnotetext#1{%
7958   \H@@footnotetext{%
7959     \ifHy@nesting
7960       \expandafter\ltx@firstoftwo
7961     \else
7962       \expandafter\ltx@secondoftwo
7963     \fi
7964     {%
7965       \expandafter\hyper@@anchor\expandafter{%
7966         \Hy@footnote@currentHref
7967       }\ignorespaces #1}%
7968   }{%
7969     \Hy@raisedlink{%
7970       \expandafter\hyper@@anchor\expandafter{%

```

```

7971      \Hy@footnote@currentHref
7972      }{\relax}%
7973  }%
7974  \let\@currentHref\Hy@footnote@currentHref
7975  \let\@currentlabelname\@empty
7976  \ignorespaces #1%
7977  }%
7978  }%
7979  }%

```

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.

```

7980  \def\@footnotemark{%
7981    \leavevmode
7982    \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7983    \stepcounter{Hfootnote}%
7984    \global\let\Hy@saved@currentHref\@currentHref
7985    \hyper@makecurrent{Hfootnote}%
7986    \global\let\Hy@footnote@currentHref\@currentHref
7987    \global\let\@currentHref\Hy@saved@currentHref
7988    \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7989    \@makefnmark
7990    \hyper@linkend
7991    \ifhmode\spacefactor\@x@sf\fi
7992    \relax
7993  }%

```

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

```

7994  \@ifpackageloaded{tabularx}{%
7995    \let\HyOrg@TX@endtabularx\TX@endtabularx
7996    \def\Hy@tabularx@hook{%
7997      \let\@footnotetext\H@@footnotetext
7998      \let\@footnotemark\H@@footnotemark
7999      \let\@mpfootnotetext\H@@mpfootnotetext
8000    }%
8001    \begingroup
8002    \toks@{\expandafter\TX@endtabularx}%
8003    \xdef\Hy@gtemp{%
8004      \noexpand\Hy@tabularx@hook
8005      \the\toks@
8006    }%
8007    \endgroup
8008    \let\TX@endtabularx\Hy@gtemp
8009  }{}%

```

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

```

8010  \@ifpackageloaded{longtable}{%
8011    \CheckCommand*{\LT@p@ftntext}[1]{%
8012      \edef\@tempa{%
8013        \the\LT@p@ftn
8014        \noexpand\footnotetext[\the\c@footnote]%

```

```

8015 }%
8016 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
8017 }%
8018 \long\def\LT@p@ftntext#1{%
8019 \edef\@tempa{%
8020 \the\LT@p@ftn
8021 \begingroup
8022 \noexpand\c@footnote=\the\c@footnote\relax
8023 \noexpand\protected@xdef\noexpand\@thefnmark{%
8024 \noexpand\thempfn
8025 }%
8026 \noexpand\Hy@LT@footnotetext{%
8027 \Hy@footnote@currentHref
8028 }%
8029 }%
8030 \global\LT@p@ftn\expandafter{%
8031 \@tempa{#1}%
8032 \endgroup
8033 }%
8034 }%
8035 \long\def\Hy@LT@footnotetext#1#2{%
8036 \H@footnotetext{%
8037 \ifHy@nesting
8038 \hyper@@anchor{#1}{#2}%
8039 \else
8040 \Hy@raisedlink{%
8041 \hyper@@anchor{#1}{\relax}%
8042 }%
8043 \def\@currentHref{#1}%
8044 \let\@currentlabelname\@empty
8045 #2%
8046 \fi
8047 }%
8048 }%
8049 }{}%

```

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

```

8050 \@ifpackageloaded{fancyvrb}{%
8051 \def\V@footnotetext{%
8052 \insert\footins\bgroup
8053 \c@name reset@font\endc@name
8054 \footnotesize
8055 \interlinepenalty\interfootnotelinepenalty
8056 \splittopskip\footnotesep
8057 \splitmaxdepth\dp\strutbox
8058 \floatingpenalty \@MM
8059 \hsize\columnwidth
8060 \@parboxrestore
8061 \edef\@currentlabel{\c@name p@footnote\endc@name\@thefnmark}%
8062 \@makefnmark}%
8063 \rule{\z@}{\footnotesep}%
8064 \bgroup
8065 \aftergroup\V@@@footnotetext
8066 \Hy@raisedlink{%
8067 \expandafter\hyper@@anchor\expandafter{%
8068 \Hy@footnote@currentHref
8069 }{\relax}%
8070 }%

```

```

8071 \let\@currentHref\Hy@footnote@currentHref
8072 \let\@currentlabelname\@empty
8073 \ignorespaces
8074 }%
8075 }{}%

```

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

```

8076 \def\Hy@temp#1{%
8077 \begingroup
8078 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8079 \endgroup
8080 \@footnotemark
8081 }%
8082 \ifx\Hy@temp\footref
8083 \def\footref#1{%
8084 \begingroup
8085 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8086 \endgroup
8087 \H@@footnotemark
8088 }%
8089 \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.

```

8090 \let\HyOrg@maketitle\maketitle
8091 \def\maketitle{%
8092 \let\Hy@saved@footnotemark\@footnotemark
8093 \let\Hy@saved@footnotetext\@footnotetext
8094 \let\@footnotemark\H@@footnotemark
8095 \let\@footnotetext\H@@footnotetext
8096 \@ifnextchar[\Hy@maketitle@optarg{% ]
8097 \HyOrg@maketitle
8098 \Hy@maketitle@end
8099 }%
8100 }%
8101 \def\Hy@maketitle@optarg[#1]{%
8102 \HyOrg@maketitle[{#1}]%
8103 \Hy@maketitle@end
8104 }%
8105 \def\Hy@maketitle@end{%
8106 \ifx\@footnotemark\H@@footnotemark
8107 \let\@footnotemark\Hy@saved@footnotemark
8108 \fi
8109 \ifx\@footnotetext\H@@footnotetext
8110 \let\@footnotetext\Hy@saved@footnotetext
8111 \fi
8112 }%

```

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

```

8113 \def\realfootnote{%
8114 \@ifnextchar[\@xfootnote{%
8115 \stepcounter{\@mpfn}%
8116 \protected@xdef\@thefnmark{\thempfn}%
8117 \H@@footnotemark\H@@footnotetext
8118 }%
8119 }%

```



```

8120 \fi
8121 \Hy@DisableOption{hyperfootnotes}

8122 \</package>
8123 \<{*check>
8124 \checklatex
8125 \checkcommand\def\@xfootnotenext[#1]{%
8126   \begingroup
8127     \csname c@\@mpfn\endcsname #1\relax
8128     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8129   \endgroup
8130   \@footnotetext
8131 }
8132 \checkcommand\def\@xfootnotemark[#1]{%
8133   \begingroup
8134     \c@footnote #1\relax
8135     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8136   \endgroup
8137   \@footnotemark
8138 }
8139 \checkcommand\def\@footnotemark{%
8140   \leavevmode
8141   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8142   \@makefnmark
8143   \ifhmode\spacefactor\@x@sf\fi
8144   \relax
8145 }
8146 \</check>
8147 \<{*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.

```

8148 \def\caption{%
8149   \ifx\@captype\@undefined
8150     \@latex@error{\noexpand\caption outside float}\@ehd
8151     \expandafter\@gobble
8152   \else
8153     \H@refstepcounter\@captype
8154     \let\Hy@tempa\@caption
8155     \@ifundefined{float@caption}{%
8156       }{%
8157         \expandafter\ifx\csname @float@c@\@captype\endcsname
8158           \float@caption
8159         \let\Hy@tempa\Hy@float@caption
8160       \fi
8161     }%
8162     \expandafter\@firstofone
8163   \fi
8164   {\@dblarg{\Hy@tempa\@captype}}}%
8165 }
8166 \long\def\@caption#1[#2]#3{%
8167   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8168     \csname iftrue\endcsname
8169     \global\let\@currentHref\hc@currentHref

```

```

8170 \else
8171   \hyper@makecurrent{\@captype}%
8172 \fi
8173 \@ifundefined{NR@getttitle}{%
8174   \def\@currentlabelname{#2}%
8175 }{%
8176   \NR@getttitle{#2}%
8177 }%
8178 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8179   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8180 }%
8181 \begingroup
8182   \@parboxrestore
8183   \if@minipage
8184     \setminipage
8185   \fi
8186   \normalsize
8187   \expandafter\ifx\csname if@capstart\endcsname
8188     \csname iftrue\endcsname
8189   \global\@capstartfalse
8190   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8191 \else
8192   \@makecaption{\csname fnum@#1\endcsname}{%
8193     \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8194   \ifHy@nesting
8195     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8196   \else
8197     \Hy@raisedlink{%
8198       \expandafter\hyper@@anchor\expandafter{%
8199         \@currentHref
8200       }\relax}%
8201     }%
8202     #3%
8203   \fi
8204 }%
8205 \fi
8206 \par
8207 \endgroup
8208 }

```

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’.

```

8209 \let\Hy@float@caption\@caption
8210 \newcommand{\HyNew@float@makebox}[1]{%
8211   \HyOrg@float@makebox{%
8212     #1\relax
8213     \ifx\Hy@float@currentHref\@undefined
8214     \else
8215       \expandafter\hyper@@anchor\expandafter{%
8216         \Hy@float@currentHref
8217       }\relax}%
8218     \global\let\Hy@float@currentHref\@undefined
8219   \fi

```

```

8220 }%
8221 }%
8222 \@ifpackageloaded{float}{%
8223   \def\Hy@float@caption{%
8224     \ifx\Hy@float@currentHref\@undefined
8225       \hyper@makecurrent{\@cuptype}%
8226       \global\let\Hy@float@currentHref\@currentHref
8227     \else
8228       \let\@currentHref\Hy@float@currentHref
8229     \fi
8230   \float@caption
8231 }%
8232 \let\HyOrg@float@makebox\float@makebox
8233 \let\float@makebox\HyNew@float@makebox
8234 }{}

8235 \</package>
8236 \< *check>
8237 \checklatex[1999/06/01 - 2000/06/01]
8238 \checkcommand\def\caption{%
8239   \ifx\@cuptype\@undefined
8240     \@latex@error{\noexpand\caption outside float}\@ehd
8241     \expandafter\@gobble
8242   \else
8243     \refstepcounter\@cuptype
8244     \expandafter\@firstofone
8245   \fi
8246   {\@dblarg{\@caption\@cuptype}}%
8247 }
8248 \checkcommand\long\def\@caption#1[#2]#3{%
8249   \par
8250   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8251     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8252   }%
8253   \begingroup
8254     \@parboxrestore
8255     \if@minipage
8256       \setminipage
8257     \fi
8258     \normalsize
8259     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8260   \endgroup
8261 }
8262 \< /check>
8263 \< *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.

```

8264 \def\hyper@natlinkstart#1{%
8265   \Hy@backout{#1}%
8266   \hyper@linkstart{cite}{cite.#1}%
8267   \def\hyper@nat@current{#1}%
8268 }
8269 \def\hyper@natlinkend{%
8270   \hyper@linkend
8271 }
8272 \def\hyper@natlinkbreak#1#2{%
8273   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8274 }
8275 \def\hyper@natanchorstart#1{%
8276   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8277 }
8278 \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.

```

8279 \let\@ifundefined{NAT@parse}{%
8280   \providecommand*\@extra@binfo{}%
8281   \providecommand*\@extra@b@citeb{}%
8282   \def\bibcite#1#2{%
8283     \@newl@bel{b}{#1\@extra@binfo}{%
8284       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8285     }%
8286   }%
8287   \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.”.

```

8288 \let\Hy@bibcite\bibcite
8289 \begingroup
8290   \@ifundefined{bbl@cite@choice}{}{%
8291     \g@addto@macro\bbl@cite@choice{%
8292       \let\bibcite\Hy@bibcite
8293     }%
8294   }%
8295 \endgroup

```

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

```

8296 \providecommand*\@BIBLABEL{\@biblabel}%
8297 \def\@bibitem[#1]#2{%
8298   \@skiphyperrereftrue
8299   \H@item[%
8300     \ifx\Hy@raisedlink\@empty
8301       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8302       \@BIBLABEL{#1}%
8303       \hyper@anchorend
8304     \else
8305       \Hy@raisedlink{%
8306         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8307       }%
8308       \@BIBLABEL{#1}%
8309     \fi
8310     \hfill
8311   ]%

```

```

8312 \skiphyperreffalse
8313 \if@filesw
8314 \begingroup
8315 \let\protect\noexpand
8316 \immediate\write\@auxout{%
8317 \string\bibcite{#2}{#1}%
8318 }%
8319 \endgroup
8320 \fi
8321 \ignorespaces
8322 }%

```

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

```

8323 \def\@bibitem#1{%
8324 \skiphyperrefftrue\H@item\skiphyperreffalse
8325 \Hy@raisedlink{%
8326 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8327 }%
8328 \if@filesw
8329 \begingroup
8330 \let\protect\noexpand
8331 \immediate\write\@auxout{%
8332 \string\bibcite{#1}{\the\value{\@listctr}}}%
8333 }%
8334 \endgroup
8335 \fi
8336 \ignorespaces
8337 }%
8338 }{}

8339 \</package>
8340 \< *check>
8341 \checklatex
8342 \checkcommand\def\@bibitem[#1]#2{%
8343 \item[\@biblabel{#1}\hfill]%
8344 \if@filesw
8345 {%
8346 \let\protect\noexpand
8347 \immediate\write\@auxout{%
8348 \string\bibcite{#2}{#1}%
8349 }%
8350 }%
8351 \fi
8352 \ignorespaces
8353 }
8354 \checkcommand\def\@bibitem#1{%
8355 \item
8356 \if@filesw
8357 \immediate\write\@auxout{%
8358 \string\bibcite{#1}{\the\value{\@listctr}}}%
8359 }%
8360 \fi
8361 \ignorespaces
8362 }
8363 \</check>
8364 \< *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.

```

8365 \ifclassloaded{revtex}{%
8366 \Hy@Info{*** compatibility with revtex **** }%
8367 \def\revtex@checking#1#2{%
8368 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8369 \expandafter\def\csname b@#1\endcsname{#2}%
8370 \@SetMaxRnhefLabel{#1}%
8371 \expandafter\let\csname b@#1\endcsname\T@temp
8372 }%

```

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

```

8373 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8374 \providecommand*{\@extra@b@citeb}{}%
8375 \def\CITE[#1]#2{%
8376 \let\@citea\@empty
8377 \leavevmode
8378 \unskip
8379 $\{
8380 \scriptstyle
8381 \CITE{%
8382 \@for\@citeb:=#2\do{%
8383 \@citea
8384 \def\@citea{\penalty\@m }%
8385 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8386 \if@filesw
8387 \immediate\write\@auxout{\string\citation{\@citeb}}%
8388 \fi
8389 \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8390 \mbox{\reset@font\bfseries ?}%
8391 \G@refundefinedtrue
8392 \@latex@warning{%
8393 Citation '\@citeb' on page \thepage \space undefined%
8394 }%
8395 }%
8396 {\csname b@\@citeb\extra@b@citeb\endcsname}%
8397 }%
8398 }%
8399 }{#1}%
8400 }$%
8401 }%

```

No, life is too short. I am not going to understand the Revtex \collapse macro, I shall just restore the original behaviour of \cite_x; sigh. This is SO vile.

```

8402 \def\citex[#1]#2{%
8403 \let\@citea\@empty
8404 \@cite{%
8405 \@for\@citeb:=#2\do{%
8406 \@citea
8407 \def\@citea{\penalty\@m }%
8408 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8409 \if@filesw
8410 \immediate\write\@auxout{\string\citation{\@citeb}}%
8411 \fi
8412 \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8413 \mbox{\reset@font\bfseries ?}%
8414 \G@refundefinedtrue

```

```

8415      \@latex@warning{%
8416        Citation `\'@citeb' on page \thepage \space undefined%
8417      }%
8418    }{%
8419      \hbox{\csname b@\'@citeb\@extra@b@citeb\endcsname}%
8420    }%
8421  }%
8422  }{#1}%
8423 }%
8424 }{}

```

38.1 Package harvard

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

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

```

8425 \@ifpackageloaded{harvard}{%
8426   \Hy@AtBeginDocument{%
8427     \Hy@Info{*** compatibility with harvard **** }%
8428     \Hy@raiselinksfalse
8429     \def\harvardcite#1#2#3#4{%
8430       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
8431       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
8432       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
8433       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8434     }%
8435     \def\HAR@citetoaux#1{%
8436       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8437       \ifHy@backref
8438         \ifx\@empty\@currentlabel
8439           \else
8440             \@bsphack
8441             \if@filesw
8442               \protected@write\@auxout{}{%
8443                 \string\@writefile{brf}{%
8444                   \string\backcite{#1}{%
8445                     {\thepage}{\@currentlabel}{\@currentHref}%
8446                   }%
8447                 }%
8448             }%
8449             \fi
8450             \@esphack
8451           \fi
8452         \fi
8453       }%
8454       \def\harvarditem{%
8455         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8456       }%
8457       \def\@harvarditem[#1]#2#3#4#5\par{%
8458         \item[]%
8459         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8460         \if@filesw

```

```

8461 \begingroup
8462 \def\protect##1{\string ##1\space}%
8463 \ifthenelse{\equal{#1}{\null}}{%
8464   {\def\next{{#4}{#2}{#2}{#3}}}%
8465   {\def\next{{#4}{#2}{#1}{#3}}}%
8466   \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8467 \endgroup
8468 \fi
8469 \protect\hspace*{-\labelwidth}%
8470 \protect\hspace*{-\labelsep}%
8471 \ignorespaces
8472 #5%
8473 \ifHy@backref
8474   \newblock
8475   \backref{\csname br@#4\endcsname}%
8476 \fi
8477 \par
8478 }%

```

\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:

```

8479 \long\def\HAR@checkcitations#1#2#3#4{%
8480   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8481   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8482     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8483     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8484       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8485       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8486         \else
8487           \@tempswatrue
8488         \fi
8489       \else
8490         \@tempswatrue
8491       \fi
8492     \else
8493       \@tempswatrue
8494     \fi
8495   }%
8496 }%
8497 {}

```

38.2 Package chicago

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

```

8498 \@ifpackageloaded{chicago}{%

```

\citeN

```

8499 \def\citeN{%
8500   \def\@citesep{-1000}%
8501   \def\@cite##1##2{##1}%
8502   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8503   \@citedata@opt
8504 }%

```



```

\shortciteN
8505 \def\shortciteN{%
8506 \def\@citeseppen{-1000}%
8507 \def\@cite##1##2{##1}%
8508 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8509 \@citedata@opt
8510 }%

\@citedata@opt
8511 \def\@citedata@opt{%
8512 \let\@cite@opt\@empty
8513 \@ifnextchar [{%
8514 \@tempswatrue
8515 \@citedatax@opt
8516 }{%
8517 \@tempswafalse
8518 \@citedatax[]%
8519 }%
8520 }%

\@citedatax@opt
8521 \def\@citedatax@opt[#1]{%
8522 \def\@cite@opt{, #1}%
8523 \@citedatax[{#1}]%
8524 }%

8525 }{}

```

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.

```

8526 \ltx@ifclassloaded{slides}{%
8527 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8528 \def\Hy@PageAnchorSlidesPlain{%
8529 \advance\c@page\ltx@one
8530 \edef\Hy@TempPageAnchor{%
8531 \noexpand\hyper@@@anchor{%
8532 page.\the\c@slide.\the\c@overlay.\the\c@note%
8533 \ifnum\c@page=\ltx@one
8534 \else
8535 .\the\c@page
8536 \fi
8537 }%
8538 }%
8539 \advance\c@page-\ltx@one
8540 }%
8541 \def\Hy@PageAnchorSlide{%
8542 \advance\c@page\ltx@one
8543 \ifnum\c@page>\ltx@one
8544 \ltx@ifundefined{theHpage}{%
8545 \protected@edef\Hy@TheSlideOptionalPage{%

```

```

8546     \Hy@SlidesFormatOptionalPage{\thepage}%
8547     }%
8548   }{%
8549     \protected@edef\Hy@TheSlideOptionalPage{%
8550       \Hy@SlidesFormatOptionalPage{\theHpage}%
8551     }%
8552   }%
8553   \else
8554     \def\Hy@TheSlideOptionalPage{}%
8555   \fi
8556   \advance\c@page-\ltx@one
8557   \pdfstringdef\@the@H@page{%
8558     \csname
8559       the%
8560       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8561       \Hy@SlidesPage
8562     \endcsname
8563     \Hy@TheSlideOptionalPage
8564   }%
8565   \ltx@gobblethree
8566 }%
8567 \def\Hy@SlidesPage{slide}%
8568 \g@addto@macro\slide{%
8569   \def\Hy@SlidesPage{slide}%
8570 }%
8571 \g@addto@macro\overlay{%
8572   \def\Hy@SlidesPage{overlay}%
8573 }%
8574 \g@addto@macro\note{%
8575   \def\Hy@SlidesPage{note}%
8576 }%
8577 }{%
8578   \def\Hy@PageAnchorSlidesPlain{}%
8579   \def\Hy@PageAnchorSlide{}%
8580 }
8581 \def\Hy@EveryPageAnchor{%
8582   \Hy@DistillerDestFix
8583   \ifHy@pageanchor
8584     \ifHy@hypertextnames
8585       \ifHy@plainpages
8586         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8587         \Hy@PageAnchorSlidesPlain
8588       \else
8589         \begingroup
8590           \let\@number\@firstofone
8591           \Hy@unicodedefalse
8592           \Hy@PageAnchorSlide
8593           \pdfstringdef\@the@H@page{\thepage}%
8594         \endgroup
8595         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8596         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8597       \fi
8598     \else
8599       \Hy@GlobalStepCount\Hy@pagecounter
8600       \def\Hy@TempPageAnchor{%
8601         \hyper@@anchor{page.\the\Hy@pagecounter}%
8602       }%

```

```

8603 \fi
8604 \vbox to 0pt{%
8605 \kern\voffset
8606 \kern\topmargin
8607 \kern-1bp\relax
8608 \hbox to 0pt{%
8609 \kern\hoffset
8610 \kern\ifodd\value{page}%
8611 \oddsidemargin
8612 \else
8613 \evensidemargin
8614 \fi
8615 \kern-1bp\relax
8616 \Hy@TempPageAnchor\relax
8617 \hss
8618 }%
8619 \vss
8620 }%
8621 \fi
8622 }
8623 \g@addto@macro\Hy@EveryPageBoxHook{%
8624 \Hy@EveryPageAnchor
8625 }

```

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.

```

8626 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8627 % line in the \textt{toc}file.
8628 % \begin{macrocode}
8629 \providecommand\protected@file@percent{}
8630 \def\addcontentsline#1#2#3{% toc extension, type, tag
8631 \begingroup
8632 \let\label\@gobble
8633 \ifx\@currentHref\@empty
8634 \Hy@Warning{%
8635 No destination for bookmark of \string\addcontentsline,%
8636 \MessageBreak destination is added%
8637 }%
8638 \phantomsection
8639 \fi
8640 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8641 \begingroup
8642 \def\Hy@tempa{#1}%
8643 \ifx\Hy@tempa\Hy@bookmarkstype
8644 \Hy@WarningNoLine{%
8645 bookmark level for unknown #2 defaults to 0%
8646 }%
8647 \else
8648 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8649 \fi
8650 \endgroup
8651 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8652 \fi

```

```

8653 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8654 \Hy@writebookmark{\csname the#2\endcsname}%
8655   {#3}%
8656   {\@currentHref}%
8657   {\Hy@toclevel}%
8658   {#1}%
8659 \ifHy@verbose
8660 \begingroup
8661   \def\Hy@tempa{#3}%
8662   \@onelevel@sanitize\Hy@tempa
8663   \let\temp@online\on@line
8664   \let\on@line\@empty
8665   \Hy@Info{%
8666     bookmark\temp@online:\MessageBreak
8667     thecounter {\csname the#2\endcsname}\MessageBreak
8668     text {\Hy@tempa}\MessageBreak
8669     reference {\@currentHref}\MessageBreak
8670     toplevel {\Hy@toclevel}\MessageBreak
8671     type {#1}%
8672   }%
8673 \endgroup
8674 \fi
8675 \addtocontents{#1}{%
8676 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8677 }%
8678 \endgroup
8679 }

```

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

```

8680 \def\contentsline#1#2#3#4{%
8681 \begingroup
8682 \Hy@safe@activertrue
8683 \edef\x{\endgroup
8684 \def\noexpand\Hy@tocdestname{#4}%
8685 }\x
8686 \ifx\Hy@tocdestname\ltx@empty
8687 \csname l@#1\endcsname{#2}{#3}%
8688 \else
8689 \ifcase\Hy@linktoc % none
8690 \csname l@#1\endcsname{#2}{#3}%
8691 \or % section
8692 \csname l@#1\endcsname{%
8693 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8694 }{#3}%
8695 \or % page
8696 \def\Hy@temp{#3}%
8697 \ifx\Hy@temp\ltx@empty
8698 \csname l@#1\endcsname{#2}{#3}%
8699 \else
8700 \csname l@#1\endcsname{{#2}}{%
8701 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8702 }%
8703 \fi
8704 \else % all
8705 \def\Hy@temp{#3}%

```

```

8706 \ifx\Hy@temp\ltx@empty
8707 \csname l@#1\endcsname{%
8708 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8709 }{}%
8710 \else
8711 \csname l@#1\endcsname{%
8712 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8713 }{%
8714 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8715 }%
8716 \fi
8717 \fi
8718 \fi
8719 }

8720 \</package>
8721 \<*check>
8722 \checklatex
8723 \checkcommand\def\addcontentsline#1#2#3{%
8724 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8725 }
8726 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8727 \</check>
8728 \<*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.

```

8729 \let\H@definecounter\@definecounter
8730 \def\@definecounter#1{%
8731 \H@definecounter{#1}%
8732 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8733 }

```

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.

```

8734 \let\H@newctr\@newctr
8735 \def\@newctr#1[#2]{%
8736 \H@newctr#1[#2]%
8737 \expandafter\gdef\csname theH#1\endcsname{%
8738 \csname the\@ifundefined{theH#2}{H}{#2}\endcsname.\arabic{#1}}%
8739 }%
8740 }

```

42 AMSI^ATeX 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.

```

8741 \@ifpackageloaded{amsmath}{%
8742 \def\Hy@make@anchor{%

```

```

8743 \Hy@MakeCurrentHrefAuto{AMS}%
8744 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8745 }%
8746 \def\Hy@make@df@tag@@#1{%
8747 \gdef\df@tag{%
8748 \maketag@@@{\Hy@make@anchor#1}%
8749 \def\@currentlabel{#1}%
8750 }%
8751 }%
8752 \def\Hy@make@df@tag@@@#1{%
8753 \gdef\df@tag{%
8754 \tagform@{\Hy@make@anchor#1}%
8755 \toks@{\@xp{\p@equation{#1}}}%
8756 \edef\@currentlabel{\the\toks@}%
8757 }%
8758 }%
8759 \let\HyOrg@make@df@tag@@\make@df@tag@@
8760 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8761 \let\make@df@tag@@\Hy@make@df@tag@@
8762 \let\make@df@tag@@@\Hy@make@df@tag@@@
8763 }-}

```

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

```

8764 \@ifpackagewith{hyperref}{pdftex}{%
8765 \let\H@seteqlabel\@seteqlabel
8766 \def\@seteqlabel#1{%
8767 \H@seteqlabel{#1}%
8768 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8769 \Hy@raisedlink{%
8770 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8771 }%
8772 }%
8773 }-}

```

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.

```

8774 \let\HyOrg@addtoreset\@addtoreset
8775 \def\@addtoreset#1#2{%
8776 \HyOrg@addtoreset{#1}{#2}%
8777 \expandafter\xdef\csname theH#1\endcsname{%
8778 \expandafter\noexpand
8779 \csname the\@ifundefined{theH#2}{\}H#2\endcsname
8780 .\noexpand\the\noexpand\value{#1}%

```

```

8781 }%
8782 }

```

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

```

8783 </package>
8784 <*check>
8785 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8786 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8787   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8788     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8789       \@addtoreset{#2}{#3}%
8790       \@xp\xdef\csname the#2\endcsname{%
8791         \@xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8792       }%
8793     }%
8794   }%
8795 }%
8796 </check>
8797 <*package>
8798 \@ifpackageloaded{amsmath}{%
8799   \@ifpackagelater{amsmath}{1999/12/14}{%
8800     \renewcommand*\numberwithin[3][\arabic]{%
8801       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8802         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8803           \HyOrg@addtoreset{#2}{#3}%
8804           \@xp\xdef\csname the#2\endcsname{%
8805             \@xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8806           }%
8807           \@xp\xdef\csname theH#2\endcsname{%
8808             \@xp\@nx
8809             \csname the\@ifundefined{theH#3}{H#3\endcsname
8810             .\@nx#1{#2}%
8811           }%
8812         }%
8813       }%
8814     }%
8815   }{%
8816     \Hy@WarningNoLine{%
8817       \string\numberwithin\space of package `amsmath' %
8818       only fixed\MessageBreak
8819       for version 2000/06/06 v2.12 or newer%
8820     }%
8821   }%
8822 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8823 \ifHy@hyperfigures
8824   \let\Hy@Gin@setfile\Gin@setfile
8825   \def\Gin@setfile#1#2#3{%
8826     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8827   }%
8828 \fi
8829 \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.

```

8830 \ifHy@hyperindex
8831   \def\HyInd@ParenLeft{({}%
8832   \def\HyInd@ParenRight{)}}%
8833   \def\hyperindexformat#1#2{%
8834     \let\HyOrg@hyperpage\hyperpage
8835     \let\hyperpage\@firstofone
8836     #1{\HyOrg@hyperpage{#2}}}%
8837   \let\hyperpage\HyOrg@hyperpage
8838 }%
8839 \Hy@nextfalse
8840 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8841 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8842 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8843 \begingroup
8844   \lccode`\|=\expandafter`\HyInd@EncapChar\relax
8845   \lccode`\/=\|\|\relax
8846 \lowercase{\endgroup
8847   \ifHy@next
8848     \let\HyInd@org@wrindex\@wrindex
8849     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\|}%
8850     \def\HyInd@@wrindex#1#2|#3|#4\|{%
8851       \ifx\|#3\|
8852         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8853       \else
8854         \HyInd@@@wrindex{#1}{#2}#3\|
8855       \fi
8856     }%
8857     \def\HyInd@@@wrindex#1#2#3#4\|{%
8858       \def\Hy@temp@A{#3}%
8859       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8860         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8861       \relax
8862       \HyInd@org@wrindex{#1}{%
8863         #2|hyperindexformat{/#3#4}%
8864       }%
8865     \else
8866       \ifx\|#4\|
8867         \ifx\Hy@temp@A\HyInd@ParenRight
8868           \HyInd@org@wrindex{#1}{#2|#3}%
8869         \else
8870           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8871         \fi
8872       \else
8873         \HyInd@org@wrindex{#1}{%
8874           #2|#3hyperindexformat{/#4}%

```



```

8875     }%
8876     \fi
8877   \fi
8878 }%
8879 \else
8880 \def\@wrindex#1{\@@wrindex#1||\}%
8881 \def\@@wrindex#1|#2|#3\{\%
8882 \if@filesw
8883 \ifx\|#2\%
8884 \protected@write\@indexfile{\%
8885 \string\indexentry{#1|hyperpage}{\thepage}%
8886 }%
8887 \else
8888 \HyInd@@@wrindex{#1}#2\%
8889 \fi
8890 \fi
8891 \endgroup
8892 \@esphack
8893 }%
8894 \def\HyInd@@@wrindex#1#2#3\{\%
8895 \def\Hy@temp@A{#2}%
8896 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8897 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8898 \relax
8899 \protected@write\@indexfile{\%
8900 \string\indexentry{%
8901 #1|hyperindexformat{/#2#3}%
8902 }{\thepage}%
8903 }%
8904 \else
8905 \ifx\|#3\%
8906 \ifx\Hy@temp@A\HyInd@ParenRight
8907 \HyInd@DefKey{#1}%
8908 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8909 \let\Hy@temp\ltx@empty
8910 }{\%
8911 \expandafter\let\expandafter\Hy@temp
8912 \csname HyInd@(\HyInd@key)\endcsname
8913 }%
8914 \protected@write\@indexfile{\%
8915 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8916 }%
8917 \else
8918 \protected@write\@indexfile{\%
8919 \string\indexentry{#1|#2hyperpage}{\thepage}%
8920 }%
8921 \HyInd@DefKey{#1}%
8922 \expandafter
8923 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8924 hyperpage%
8925 }%
8926 \fi
8927 \else
8928 \protected@write\@indexfile{\%
8929 \string\indexentry{%
8930 #1|#2hyperindexformat{/#3}%
8931 }{\thepage}%

```

```

8932      }%
8933      \ifx\Hy@temp@A\HyInd@ParenLeft
8934      \HyInd@DefKey{#1}%
8935      \expandafter
8936      \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8937      hyperindexformat{/#3}%
8938      }%
8939      \fi
8940    \fi
8941  \fi
8942 }%
8943 \def\HyInd@DefKey#1{%
8944   \begingroup
8945   \let\protect\@unexpandable@protect
8946   \edef\Hy@temp{#1}%
8947   \ltx@onelevel@sanitize\Hy@temp
8948   \global\let\HyInd@key\Hy@temp
8949   \endgroup
8950 }%
8951 \fi
8952 }%
8953 \fi
8954 \Hy@DisableOption{hyperindex}
8955 \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.

```

8956 \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.

```

8957 \def\hyperpage#1{%
8958   \HyInd@hyperpage#1\nohyperpage{}\@nil
8959 }
8960 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8961   \HyInd@@hyperpage{#1}%
8962   #2%
8963   \def\Hy@temp{#3}%
8964   \ifx\Hy@temp\@empty
8965   \else
8966     \ltx@ReturnAfterFi{%
8967       \HyInd@hyperpage#3\@nil
8968     }%
8969   \fi
8970 }
8971 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
8972 \def\@hyperpage#1--#2--#3\{\%
8973   \ifx\#2\%
8974     \@commahyperpage{#1}%
8975   \else
8976     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8977   \fi
8978 }
8979 \def\@commahyperpage#1{\@commahyperpage#1, \}
8980 \def\@commahyperpage#1, #2,#3\{\%
8981   \ifx\#2\%
8982     \HyInd@pagelink{#1}%

```

```

8983 \else
8984   \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8985 \fi
8986 }

```

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

```

8987 \def\HyInd@pagelink#1{%
8988   \begingroup
8989   \toks@={}%
8990   \HyInd@removespaces#1 \@nil
8991   \endgroup
8992 }
8993 \def\HyInd@removespaces#1 #2\@nil{%
8994   \toks@=\expandafter{\the\toks@#1}%
8995   \ifx\#2\%
8996     \edef\x{\the\toks@}%
8997     \ifx\x\@empty
8998     \else
8999       \hyperlink{page.\the\toks@}{\the\toks@}%
9000     \fi
9001   \else
9002     \ltx@ReturnAfterFi{%
9003       \HyInd@removespaces#2\@nil
9004     }%
9005   \fi
9006 }

```

45 Compatibility with foiltex

```

9007 \@ifclassloaded{foils}{%
9008   \providecommand*{\ext@table}{lot}%
9009   \providecommand*{\ext@figure}{lof}%
9010 }{}

```

46 Compatibility with seminar slide package

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

```

9011 \@ifclassloaded{seminar}{%
9012   \Hy@seminarslidestrue
9013   \providecommand\theHslide{\arabic{slide}}%
9014 }{%
9015   \Hy@seminarslidesfalse
9016 }
9017 \@ifpackageloaded{slidesec}{%
9018   \providecommand\theHslidesection {\arabic{slidesection}}%
9019   \providecommand\theHslidesubsection{%
9020     \theHslidesection.\arabic{slidesubsection}}%
9021   }%
9022   \def\slide@heading[#1]#2{%
9023     \H@refstepcounter{slidesection}%
9024     \@addtoreset{slidesubsection}{slidesection}%
9025     \addtocontents{los}{%
9026       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
9027       {\@SCTR}{slideheading.\theslidesection}}%

```

```

9028 }%
9029 \def\Hy@tempa{#2}%
9030 \ifx\Hy@tempa\@empty
9031 \else
9032 {%
9033   \edef\@currentlabel{%
9034     \csname p@slidesection\endcsname\theslidesection
9035   }%
9036   \makeslideheading{#2}%
9037 }%
9038 \fi
9039 \gdef\theslideheading{#1}%
9040 \gdef\theslidesubheading{}%
9041 \ifHy@bookmarksnumbered
9042   \def\Hy@slidetitle{\theslidesection\space #1}%
9043 \else
9044   \def\Hy@slidetitle{#1}%
9045 \fi
9046 \ifHy@hypertextnames
9047   \ifHy@naturalnames
9048     \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9049     \Hy@writebookmark
9050       {\theslidesection}%
9051       {\Hy@slidetitle}%
9052       {slideheading.\theslidesection}%
9053       {1}%
9054       {toc}%
9055   \else
9056     \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9057     \Hy@writebookmark
9058       {\theslidesection}%
9059       {\Hy@slidetitle}%
9060       {slideheading.\theHslidesection}%
9061       {1}%
9062       {toc}%
9063   \fi
9064 \else
9065   \Hy@GlobalStepCount\Hy@linkcounter
9066   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9067   \Hy@writebookmark
9068     {\theslidesection}%
9069     {\Hy@slidetitle}%
9070     {slideheading.\the\Hy@linkcounter}%
9071     {1}%
9072     {toc}%
9073 \fi
9074 }%
9075 \def\slide@subheading[#1]#2{%
9076   \H@refstepcounter{slidesubsection}%
9077   \addtocontents{los}{%
9078     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9079     {\@SCTR}{slideheading.\theslidesubsection}%
9080   }%
9081   \def\Hy@tempa{#2}%
9082   \ifx\Hy@tempa\@empty
9083   \else
9084     {%

```

```

9085     \edef\@currentlabel{%
9086         \csname p@slidessubsection\endcsname\theslidessubsection
9087     }%
9088     \makeslidesubheading{#2}%
9089 }%
9090 \fi
9091 \gdef\theslidesubheading{#1}%
9092 \ifHy@bookmarksnumbered
9093     \def\Hy@slidetitle{\theslidessubsection\space #1}%
9094 \else
9095     \def\Hy@slidetitle{#1}%
9096 \fi
9097 \ifHy@hypertextnames
9098     \ifHy@naturalnames
9099         \hyper@@anchor{slideheading.\theslidessubsection}{\relax}%
9100         \Hy@writebookmark
9101             {\theslidessubsection}%
9102             {\Hy@slidetitle}%
9103             {slideheading.\theslidessubsection}%
9104             {2}%
9105             {toc}%
9106     \else
9107         \hyper@@anchor{slideheading.\theHslidessubsection}{\relax}%
9108         \Hy@writebookmark
9109             {\theslidessubsection}%
9110             {\Hy@slidetitle}%
9111             {slideheading.\theHslidessubsection}%
9112             {2}%
9113             {toc}%
9114     \fi
9115 \else
9116     \Hy@GlobalStepCount\Hy@linkcounter
9117     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9118     \Hy@writebookmark
9119         {\theslidessubsection}%
9120         {\Hy@slidetitle}%
9121         {slideheading.\the\Hy@linkcounter}%
9122         {1}%
9123         {toc}%
9124 \fi
9125 }%
9126 \providecommand*\listslidenamelist{List of Slides}%
9127 \def\listofslides{%
9128     \section*{%
9129         \listslidenamelist
9130         \@mkboth{%
9131             \expandafter\MakeUppercase\listslidenamelist
9132         }{%
9133             \expandafter\MakeUppercase\listslidenamelist
9134         }%
9135     }%
9136     \def\l@slide##1##2##3##4{%
9137         \slide@undottedcline{%
9138             \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9139         }%
9140     }%
9141     \let\l@subslide\l@slide

```

```

9142 \startlos
9143 }%
9144 \def\slide@contents{%
9145 \def\l@slide##1##2##3##4{%
9146 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9147 }%
9148 \let\l@subslide\@gobblefour
9149 \startlos
9150 }%
9151 \def\Slide@contents{%
9152 \def\l@slide##1##2##3##4{%
9153 \ifcase\lslide@flag
9154 \message{##1 ** \the\c@slidesection}%
9155 \ifnum##1>\c@slidesection
9156 \def\lslide@flag{1}%
9157 {%
9158 \large
9159 \slide@cline{%
9160 \slidenumberline{$\Rightarrow\bullet$}%
9161 {\hyperlink{##4}{##2}}}%
9162 }{##3}%
9163 }%
9164 \else
9165 {%
9166 \large
9167 \slide@cline{%
9168 \slidenumberline{$\surd\;\bullet$}%
9169 {\hyperlink{##4}{##2}}}%
9170 }{##3}%
9171 }%
9172 \fi
9173 \or
9174 \def\lslide@flag{2}%
9175 {%
9176 \large
9177 \slide@cline{%
9178 \slidenumberline{$\bullet$}%
9179 {\hyperlink{##4}{##2}}}%
9180 }{##3}%
9181 }%
9182 \or
9183 {%
9184 \large
9185 \slide@cline{%
9186 \slidenumberline{$\bullet$}%
9187 {\hyperlink{##4}{##2}}}%
9188 }{##3}%
9189 }%
9190 \fi
9191 }%
9192 \def\l@subslide##1##2##3##4{%
9193 \ifnum\lslide@flag=1 %
9194 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
9195 \fi
9196 }%
9197 \def\lslide@flag{0}%
9198 \startlos

```

```

9199 }%
9200 }{}

```

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.)

```

9201 \ifHy@texht
9202 \expandafter\endinput
9203 \fi
9204 \let\real@setref\@setref
9205 \def\@setref#1#2#3{% csname, extract group, refname
9206 \ifx#1\relax
9207 \protect\G@refundefinedtrue
9208 \nfss@text{\reset@font\bfseries ??}%
9209 \@latex@warning{%
9210 Reference `#3' on page \thepage \space undefined%
9211 }%
9212 \else
9213 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9214 \fi
9215 }

```

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

```

9216 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9217 \begingroup
9218 \toks0={\hyper@@link{#5}{#4}}%
9219 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9220 \edef\x{\endgroup
9221 \the\toks0 {\the\toks1 }%
9222 }%
9223 \x
9224 }
9225 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9226 \ifx#1\relax
9227 \protect\G@refundefinedtrue
9228 \nfss@text{\reset@font\bfseries ??}%
9229 \@latex@warning{%
9230 Reference `#3' on page \thepage \space undefined%
9231 }%
9232 \else
9233 \protect\hyper@@link
9234 {\expandafter\@fifthoffive#1}%
9235 {page.\expandafter\@secondoffive#1}%
9236 {\expandafter\@secondoffive#1}%
9237 \fi
9238 }
9239 \</package>
9240 \< *check>
9241 \checklatex
9242 \checkcommand\def\@setref#1#2#3{%
9243 \ifx#1\relax
9244 \protect\G@refundefinedtrue
9245 \nfss@text{\reset@font\bfseries ??}%
9246 \@latex@warning{%
9247 Reference `#3' on page \thepage \space undefined%
9248 }%
9249 \else

```

```

9250 \expandafter#2#1\null
9251 \fi
9252 }
9253 </check>
9254 (*package)

```

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

```

9255 \def\HyRef@StarSetRef#1{%
9256 \begingroup
9257 \Hy@safe@activestruer
9258 \edef\x{#1}%
9259 \@onelevel@sanitize\x
9260 \edef\x{\endgroup
9261 \noexpand\HyRef@@StarSetRef
9262 \expandafter\noexpand\csname r@\x\endcsname{\x}%
9263 }%
9264 \x
9265 }
9266 \def\HyRef@@StarSetRef#1#2#3{%
9267 \ifx#1\@undefined
9268 \let#1\relax
9269 \fi
9270 \real@setref#1#3{#2}%
9271 }
9272 \def\@refstar#1{%
9273 \HyRef@StarSetRef{#1}\@firstoffive
9274 }
9275 \def\@pagerefstar#1{%
9276 \HyRef@StarSetRef{#1}\@secondoffive
9277 }
9278 \def\@namerefstar#1{%
9279 \HyRef@StarSetRef{#1}\@thirdoffive
9280 }
9281
9282 \Hy@AtBeginDocument{%
9283 \@ifpackageloaded{varioref}{%
9284 \def\@Refstar#1{%
9285 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9286 }%
9287 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9288 \MakeUppercase#1%
9289 }%
9290 \DeclareRobustCommand*\Ref}{%
9291 \@ifstar\@Refstar\HyRef@Ref
9292 }%
9293 \def\HyRef@Ref#1{%
9294 \hyperref[{#1}]{\Ref*{#1}}%
9295 }%

```

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

```

9296 %FMi
9297 \ifdefined\vp@gerefstar
9298 \renewcommand\Vref@star[2][]{%
9299 \begingroup
9300 \let\T@pageref\@pagerefstar
9301 \Ref*{#2}
9302 \vpageref[#1]{#2}%

```



```

9303 \endgroup
9304 }%
9305 \renewcommand\Vr@f[2][]{%
9306 \begingroup
9307 \let\T@pageref\@pagerefstar
9308 \hyperref[{#2}]{%
9309 \Ref*{#2}
9310 \vpageref[#1]{#2}%
9311 }%
9312 \endgroup
9313 }%
9314 \renewcommand\vr@f[2][]{%
9315 \begingroup
9316 \let\T@pageref\@pagerefstar
9317 \hyperref[{#2}]{%
9318 \ref*{#2}
9319 \vpageref[#1]{#2}%
9320 }%
9321 \endgroup
9322 }%
9323 \renewcommand\vref@star[2][]{%
9324 \begingroup
9325 \let\T@pageref\@pagerefstar
9326 \ref*{#2}
9327 \vpageref[#1]{#2}%
9328 \endgroup
9329 }%

```

old varioref:

```

9330 \else
9331 \def\Vr@f#1{%
9332 \leavevmode\unskip\vref@space
9333 \hyperref[{#1}]{%
9334 \Ref*{#1}%
9335 \let\vref@space\nobreakspace
9336 \@vpageref[\unskip]{#1}%
9337 }%
9338 }%
9339 \def\vr@f#1{%
9340 \leavevmode\unskip\vref@space
9341 \begingroup
9342 \let\T@pageref\@pagerefstar
9343 \hyperref[{#1}]{%
9344 \ref*{#1}%
9345 \vpageref[\unskip]{#1}%
9346 }%
9347 \endgroup
9348 }%
9349 \fi
9350 %FMi -end mod
9351 }{}%
9352 }
9353
9354 \DeclareRobustCommand*\autopageref{%
9355 \ifstar{%
9356 \HyRef@autopagerefname\pageref*%
9357 }\HyRef@autopageref
9358 }

```

```

9359 \def\HyRef@autopageref#1{%
9360   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9361 }
9362 \def\HyRef@autopagerefname{%
9363   \ltx@ifundefined{pageautorefname}{%
9364     \ltx@ifundefined{pagename}{%
9365       \Hy@Warning{No autoref name for `page'}%
9366     }{%
9367       \pagename\nobreakspace
9368     }%
9369   }{%
9370     \pageautorefname\nobreakspace
9371   }%
9372 }

```

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

```

9373 \DeclareRobustCommand*{\autoref}{%
9374   \leavevmode
9375   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@{\link}}%
9376 }
9377 \def\HyRef@autoref#1#2{%
9378   \begingroup
9379   \Hy@safe@activetrue
9380   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9381   \endgroup
9382 }
9383 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9384   \HyRef@ShowKeysRef{#2}%
9385   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9386   \edef\HyRef@thisref{%
9387     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9388   }%
9389   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9390   \Hy@safe@activesfalse
9391   #3{%
9392     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9393   }{%
9394     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9395   }{%
9396     \HyRef@currentHtag
9397     \expandafter\@firstoffive#1\@empty\@empty\@empty
9398     \null
9399   }%
9400   \else
9401     \protect\G@refundefinedtrue
9402     \nfss@text{\reset@font\bfseries ??}%
9403     \@latex@warning{%
9404       Reference `#2' on page \thepage\space undefined%
9405     }%
9406     \fi
9407   }
9408 \def\HyRef@testreftype#1.#2\.{%
9409   \ltx@ifundefined{#1autorefname}{%
9410     \ltx@ifundefined{#1name}{%
9411       \HyRef@StripStar#1\*\@nil{#1}%
9412     \ltx@ifundefined{\HyRef@name autorefname}{%
9413       \ltx@ifundefined{\HyRef@name name}{%

```

```

9414 \def\HyRef@currentHtag{}%
9415 \Hy@Warning{No autoref name for `#1'}%
9416 }{%
9417 \edef\HyRef@currentHtag{%
9418 \expandafter\noexpand\csname\HyRef@name name\endcsname
9419 \noexpand~%
9420 }%
9421 }%
9422 }{%
9423 \edef\HyRef@currentHtag{%
9424 \expandafter\noexpand
9425 \csname\HyRef@name autorefname\endcsname
9426 \noexpand~%
9427 }%
9428 }%
9429 }{%
9430 \edef\HyRef@currentHtag{%
9431 \expandafter\noexpand\csname#1name\endcsname
9432 \noexpand~%
9433 }%
9434 }%
9435 }{%
9436 \edef\HyRef@currentHtag{%
9437 \expandafter\noexpand\csname#1autorefname\endcsname
9438 \noexpand~%
9439 }%
9440 }%
9441 }
9442 \def\HyRef@StripStar#1*\#\#2\@nil#3{%
9443 \def\HyRef@name{#2}%
9444 \ifx\HyRef@name\HyRef@CaseStar
9445 \def\HyRef@name{#1}%
9446 \else
9447 \def\HyRef@name{#3}%
9448 \fi
9449 }
9450 \def\HyRef@CaseStar{*\\}
9451 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

9452 \let\HyRef@ShowKeysRef\@gobble
9453 \def\HyRef@ShowKeysInit{%
9454 \begingroup\expandafter\expandafter\expandafter\endgroup
9455 \expandafter\ifx\csname SK@@label\endcsname\relax
9456 \else
9457 \ifx\SK@ref\@empty
9458 \else
9459 \def\HyRef@ShowKeysRef{%
9460 \SK@\SK@\@ref
9461 }%
9462 \fi
9463 \fi
9464 }
9465 \@ifpackageloaded{showkeys}{%
9466 \HyRef@ShowKeysInit
9467 }{%

```

```

9468 \Hy@AtBeginDocument{%
9469   \@ifpackageloaded{showkeys}{%
9470     \HyRef@ShowKeysInit
9471   }{}%
9472 }%
9473 }

```

Defaults for the names that `\autoref` uses.

```

9474 \providecommand*\AMSautorefname{\equationautorefname}
9475 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9476 \providecommand*\Itemautorefname{\itemautorefname}
9477 \providecommand*\itemautorefname{item}
9478 \providecommand*\equationautorefname{Equation}
9479 \providecommand*\footnoteautorefname{footnote}
9480 \providecommand*\itemautorefname{item}
9481 \providecommand*\figureautorefname{Figure}
9482 \providecommand*\tableautorefname{Table}
9483 \providecommand*\partautorefname{Part}
9484 \providecommand*\appendixautorefname{Appendix}
9485 \providecommand*\chapterautorefname{chapter}
9486 \providecommand*\sectionautorefname{section}
9487 \providecommand*\subsectionautorefname{subsection}
9488 \providecommand*\subsubsectionautorefname{subsubsection}
9489 \providecommand*\paragraphautorefname{paragraph}
9490 \providecommand*\subparagraphautorefname{subparagraph}
9491 \providecommand*\FancyVerbLineautorefname{line}
9492 \providecommand*\theoremautorefname{Theorem}
9493 \providecommand*\pageautorefname{page}
9494 \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`.

```

9495 \def\pdfescapestring{\pdfescapestring}
9496 \begin{group}\expandafter\expandafter\expandafter\end{group}
9497 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9498   \begin{group}
9499     \catcode`\| = 0 %
9500     \@makeother\| %
9501     |@firstofone{ \end{group}
9502     |def\Hy@pstringdef#1#2{%
9503       |begin{group}
9504         |edef~{ |string~}%
9505         |xdef\Hy@gtemp{#2}%
9506         |end{group}
9507         |let#1\Hy@gtemp
9508         |@onelevel@sanitize#1%
9509         |edef#1{ \expandafter\Hy@ExchangeBackslash#1\|@nil}%

```

```

9510 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9511 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9512 }%
9513 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9514 #1%
9515 |ifx|\#2|\%%
9516 |else
9517 \\\%
9518 |ltx@ReturnAfterFi{%
9519 |Hy@ExchangeBackslash#2|@nil
9520 }%
9521 |fi
9522 }%
9523 }%
9524 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9525 #1%
9526 \ifx\#2\%%
9527 \else
9528 \@backslashchar(%
9529 \ltx@ReturnAfterFi{%
9530 \Hy@ExchangeLeftParenthesis#2\@nil
9531 }%
9532 \fi
9533 }%
9534 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9535 #1%
9536 \ifx\#2\%%
9537 \else
9538 \@backslashchar)%
9539 \ltx@ReturnAfterFi{%
9540 \Hy@ExchangeRightParenthesis#2\@nil
9541 }%
9542 \fi
9543 }%
9544 \else
9545 \def\Hy@pstringdef#1#2{%
9546 \begingroup
9547 \edef~{\string~}%
9548 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9549 \endgroup
9550 \let#1\Hy@gtemp
9551 }%
9552 \fi
9553 </pdfTeX> | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9554 <*pdfTeX>
9555 \providecommand*\XR@ext}{pdf}
9556 \Hy@setbreaklinks{true}
9557 \def\HyPat@ObjRef{%
9558 [0-9]*[1-9][0-9]* 0 R%
9559 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfTeX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfTeX 1.30, 2005-08-081: \pdfminorversion

```

9560 \let\Hy@pdfminorversion\relax
9561 \begingroup\expandafter\expandafter\expandafter\endgroup
9562 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9563 \begingroup\expandafter\expandafter\expandafter\endgroup
9564 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9565 \else
9566 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9567 \fi
9568 \else
9569 \def\Hy@pdfminorversion{\pdfminorversion}%
9570 \fi
9571 \@ifundefined{Hy@pdfminorversion}{%
9572 \PackageInfo{hyperref}{%
9573 PDF version is not set, because pdfTeX is too old (<1.10a)%
9574 }%
9575 }{%
9576 \ifHy@ocgcolorlinks
9577 \ifnum\Hy@pdfminorversion<5 %
9578 \kvsetkeys{Hyp}{pdfversion=1.5}%
9579 \fi
9580 \fi
9581 \ifHy@setpdfversion
9582 \ifnum\Hy@pdfversion<5 %
9583 \ltx@ifundefined{pdfobjcompresslevel}{%
9584 }{%
9585 \ifHy@verbose
9586 \Hy@InfoNoLine{%
9587 PDF object streams are disabled, because they are%
9588 \MessageBreak
9589 not supported in requested PDF version %
9590 1.\Hy@pdfversion
9591 }%
9592 \fi
9593 \pdfobjcompresslevel=\ltx@zero
9594 }%
9595 \fi
9596 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9597 \else
9598 \let\Hy@temp\ltx@empty
9599 \def\Hy@temp@A#1#2{%
9600 \ifnum#1>\ltx@zero
9601 \edef\Hy@temp{%
9602 \Hy@temp
9603 \space\space
9604 \the#1\space #2%
9605 \ifnum#1=\ltx@one\else s\fi
9606 \MessageBreak
9607 }%
9608 \fi
9609 }%
9610 \Hy@temp@A\pdflastobj{PDF object}%
9611 \Hy@temp@A\pdflastxform{form XObject}%
9612 \Hy@temp@A\pdflastximage{image XObject}%
9613 \Hy@temp@A\pdflastannot{annotation}%

```

```

9614 \ltx@ifundefined{pdflastlink}{%
9615 }{%
9616 \Hy@temp@A\pdflastlink{link}%
9617 }%
9618 \ifx\Hy@temp\ltx@empty
9619 \Hy@pdfminorversion=\Hy@pdfversion\relax
9620 \else
9621 \let\Hy@temp@A\ltx@empty
9622 \ifnum\Hy@pdfversion=4 %
9623 \IfFileExists{pdf14.sty}{%
9624 \def\Hy@temp@A{%
9625 \MessageBreak
9626 Or \string\RequirePackage{pdf14} can be used%
9627 \MessageBreak
9628 before \string\documentclass\space as shortcut%
9629 }%
9630 }{}%
9631 \fi
9632 \Hy@WarningNoLine{%
9633 The PDF version number could not be set,\MessageBreak
9634 because some PDF objects are already written:%
9635 \MessageBreak
9636 \Hy@temp
9637 The version should be set as early as possible:%
9638 \MessageBreak
9639 \space\space
9640 \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9641 \string\relax
9642 \ifnum\Hy@pdfversion<5 %
9643 \ltx@ifundefined{pdfobjcompresslevel}{%
9644 }{%
9645 \MessageBreak
9646 \space\space
9647 \string\pdfobjcompresslevel=0\string\relax
9648 }%
9649 \fi
9650 \Hy@temp@A
9651 }%
9652 \fi
9653 \fi
9654 \PackageInfo{hyperref}{%
9655 \expandafter\string\Hy@pdfminorversion
9656 :=\number\Hy@pdfversion\space
9657 }%
9658 \fi
9659 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9660 }
9661 \Hy@DisableOption{pdfversion}%
9662 \ifHy@ocgcolorlinks
9663 \pdf@ifdraftmode{}{%
9664 \immediate\pdfobj{%
9665 <<%
9666 /Type/OCG%
9667 /Name(View)%
9668 /Usage<<%
9669 /Print<<%
9670 /PrintState/OFF%

```

```

9671      >>%
9672      /View<<%
9673      /ViewState/ON%
9674      >>%
9675      >>%
9676      >>%
9677 }%
9678  \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9679  \immediate\pdfobj{%
9680      <<%
9681      /Type/OCG%
9682      /Name(Print)%
9683      /Usage<<%
9684      /Print<<%
9685      /PrintState/ON%
9686      >>%
9687      /View<<%
9688      /ViewState/OFF%
9689      >>%
9690      >>%
9691      >>%
9692 }%
9693  \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
9694  \immediate\pdfobj{%
9695      [%
9696      \OBJ@OCG@view\space\OBJ@OCG@print
9697      ]%
9698 }%
9699  \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
9700  \pdfcatalog{%
9701      /OCProperties<<%
9702      /OCGs \OBJ@OCGs
9703      /D<<%
9704      /OFF[\OBJ@OCG@print]%
9705      /AS[%
9706      <<%
9707      /Event/View%
9708      /OCGs \OBJ@OCGs
9709      /Category[/View]%
9710      >>%
9711      <<%
9712      /Event/Print%
9713      /OCGs \OBJ@OCGs
9714      /Category[/Print]%
9715      >>%
9716      <<%
9717      /Event/Export%
9718      /OCGs \OBJ@OCGs
9719      /Category[/Print]%
9720      >>%
9721      ]%
9722      >>%
9723      >>%
9724 }%
9725  \begingroup
9726  \edef\x{\endgroup
9727      \pdfpageresources{%

```



```

9728     \the\pdfpageresources
9729     /Properties<<%
9730     /OCView \OBJ@OCG@view
9731     /OCPrint \OBJ@OCG@print
9732     >>%
9733   }%
9734 }%
9735 \x
9736 }%
9737 \Hy@AtBeginDocument{%
9738   \def\Hy@colorlink#1{%
9739     \begingroup
9740     \ifHy@ocgcolorlinks
9741       \def\Hy@ocgcolor{#1}%
9742       \setbox0=\hbox\bgroup\color@begingroup
9743     \else
9744       \HyColor@UseColor#1%
9745     \fi
9746   }%
9747   \def\Hy@endcolorlink{%
9748     \ifHy@ocgcolorlinks
9749       \color@endgroup\egroup
9750     \mbox{%
9751       \pdfliteral page{/OC/OCPrint BDC}%
9752       \rlap{\copy0}%
9753       \pdfliteral page{EMC/OC/OCView BDC}%
9754       \begingroup
9755         \expandafter\HyColor@UseColor\Hy@ocgcolor
9756         \box0 %
9757       \endgroup
9758       \pdfliteral page{EMC}%
9759     }%
9760   \fi
9761   \endgroup
9762 }%
9763 }%
9764 \else
9765   \Hy@DisableOption{ocgcolorlinks}%
9766 \fi

```

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

```

9767 \def\setpdfinkmargin#1{%
9768   \begingroup
9769   \setlength{\dimen@}{#1}%
9770   \expandafter\endgroup
9771   \expandafter\pdfinkmargin\the\dimen@\relax
9772 }
9773 \ifx\pdfstartlink\@undefined% less than version 14
9774   \let\pdfstartlink\pdfannotlink
9775   \let\pdfinkmargin\@tempdima
9776   \let\pdfxform\pdfform
9777   \let\pdfastxform\pdfastform
9778   \let\pdfrefxform\pdfrefform
9779 \else
9780   \pdfinkmargin1pt %
9781 \fi

```

First set up the default linking

```
9782 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9783 \Hy@WrapperDef\new@pdfink#1{%
9784   \ifhmode
9785     \@savsf\spacefactor
9786   \fi
9787   \Hy@SaveLastskip
9788   \Hy@VerboseAnchor{#1}%
9789   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9790   \Hy@DestName\Hy@pstringDest\@pdfview
9791   \Hy@RestoreLastskip
9792   \ifhmode
9793     \spacefactor\@savsf
9794   \fi
9795 }
9796 \let\pdf@endanchor\@empty
```

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

```
9797 \def\Hy@DestName#1#2{%
9798   \pdfdest name{#1}#2\relax
9799 }
```

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.

```
9800 \providecommand*\@pdfborder{0 0 1}
9801 \providecommand*\@pdfborderstyle{}
9802 \def\Hy@undefinedname{UNDEFINED}
9803 \def\find@pdfink#1#2{%
9804   \leavevmode
9805   \protected@edef\Hy@testname{#2}%
9806   \ifx\Hy@testname\@empty
9807     \Hy@Warning{%
9808       Empty destination name,\MessageBreak
9809       using '\Hy@undefinedname'%
9810     }%
9811     \let\Hy@testname\Hy@undefinedname
9812   \else
9813     \Hy@pstringdef\Hy@testname{%
9814       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9815     }%
9816   \fi
9817   \Hy@StartlinkName{%
9818     \ifHy@pdfa /F 4\fi
9819     \Hy@setpdfborder
9820     \Hy@setpdfhighlight
9821     \ifx\CurrentBorderColor\relax
9822       \else
9823         /C[\CurrentBorderColor]%
9824       \fi
9825   }\Hy@testname
9826   \expandafter\Hy@colorlink\csname @#1color\endcsname
9827 }
9828 \def\Hy@StartlinkName#1#2{%
```

```

9829 \pdfstartlink attr{#1}goto name{#2}\relax
9830 }
9831 \def\close@pdfink{%
9832 \Hy@endcolorlink
9833 \Hy@VerboseLinkStop
9834 \pdfendlink
9835 }
9836 \def\hyper@anchor#1{%
9837 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9838 }
9839 \def\hyper@anchorstart#1{%
9840 \new@pdfink{#1}%
9841 \Hy@activeanchortrue
9842 }
9843 \def\hyper@anchorend{%
9844 \pdf@endanchor
9845 \Hy@activeanchorfalse
9846 }
9847 \def\hyper@linkstart#1#2{%
9848 \Hy@VerboseLinkStart{#1}{#2}%
9849 \ltx@ifundefined{#1bordercolor}{%
9850 \let\CurrentBorderColor\relax
9851 }{%
9852 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9853 }%
9854 \find@pdfink{#1}{#2}%
9855 }
9856 \def\hyper@linkend{\close@pdfink}
9857 \def\hyper@link#1#2#3{%
9858 \Hy@VerboseLinkStart{#1}{#2}%
9859 \ltx@ifundefined{#1bordercolor}{%
9860 \let\CurrentBorderColor\relax
9861 }{%
9862 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9863 }%
9864 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9865 \close@pdfink
9866 }
9867 \let\CurrentBorderColor\@linkbordercolor
9868 \def\hyper@linkurl#1#2{%
9869 \begingroup
9870 \Hy@pstringdef\Hy@pstringURI{#2}%
9871 \hyper@chars
9872 \leavevmode
9873 \pdfstartlink
9874 attr{%
9875 \Hy@setpdfborder
9876 \Hy@setpdfhighlight
9877 \ifx\@urlbordercolor\relax
9878 \else
9879 /C[\@urlbordercolor]%
9880 \fi
9881 }%
9882 user{%
9883 /Subtype/Link%
9884 \ifHy@pdfa /F 4\fi
9885 /A<<%

```

```

9886      /Type/Action%
9887      /S/URI%
9888      /URI(\Hy@pstringURI)%
9889      \ifHy@href@ismap
9890      /IsMap true%
9891      \fi
9892      \Hy@href@nextactionraw
9893      >>%
9894      }%
9895      \relax
9896      \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9897      \close@pdflink
9898      \endgroup
9899  }
9900  \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9901  \begingroup
9902  \def\Hy@pstringF{#2}%
9903  \Hy@CleanupFile\Hy@pstringF
9904  \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9905  \Hy@pstringdef\Hy@pstringD{#3}%
9906  \Hy@MakeRemoteAction
9907  \leavevmode
9908  \pdfstartlink
9909  attr{%
9910  \Hy@setpdfborder
9911  \Hy@setpdfhighlight
9912  \ifx\@filebordercolor\relax
9913  \else
9914  /C[\@filebordercolor]%
9915  \fi
9916  }%
9917  user {%
9918  /Subtype/Link%
9919  \ifHy@pdfa /F 4\fi
9920  /A<<%
9921  /F(\Hy@pstringF)%
9922  /S/GoToR%
9923  \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}

```

```

9924      \ifx\#3\%
9925      /D[\Hy@href@page\@pdfremotestartview]%
9926      \else
9927      /D(\Hy@pstringD)%
9928      \fi
9929      \Hy@href@nextactionraw
9930      >>%

```

```

9931 }%
9932 \relax
9933 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9934 \close@pdflink
9935 \endgroup
9936 }
9937 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9938 \begingroup
9939 \Hy@pstringdef\Hy@pstringF{#1}%
9940 \Hy@pstringdef\Hy@pstringP{#3}%
9941 \leavevmode
9942 \pdfstartlink
9943 attr{%
9944 \Hy@setpdfborder
9945 \Hy@setpdfhighlight
9946 \ifx\@runbordercolor\relax
9947 \else
9948 /C[\@runbordercolor]%
9949 \fi
9950 }%
9951 user {%
9952 /Subtype/Link%
9953 \ifHy@pdfa /F 4\fi
9954 /A<<%
9955 /F(\Hy@pstringF)%
9956 /S/Launch%
9957 \Hy@SetNewWindow
9958 \ifx\#3\%
9959 \else
9960 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9961 \fi
9962 \Hy@href@nextactionraw
9963 >>%
9964 }%
9965 \relax
9966 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9967 \close@pdflink
9968 \endgroup
9969 }

```

\PDF@SetupDox

```

9970 \def\PDF@SetupDoc{%
9971 \ifx\@pdfpagescrop\@empty
9972 \else
9973 \edef\process@me{%
9974 \pdfpagesattr=%
9975 /CropBox[\@pdfpagescrop]%
9976 \expandafter\ifx\expandafter\the\pdfpagesattr\%
9977 \else
9978 ^^J\the\pdfpagesattr
9979 \fi
9980 }%
9981 }%
9982 \process@me
9983 \fi
9984 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9985 \pdfcatalog{%

```

```

9986 /PageMode/\@pdfpagemode
9987 \ifx\@baseurl\@empty
9988 \else
9989 /URI<</Base(\Hy@pstringB)>>%
9990 \fi
9991 }%
9992 \ifx\@pdfstartpage\@empty
9993 \else
9994 \ifx\@pdfstartview\@empty
9995 \else
9996 openaction goto page\@pdfstartpage{\@pdfstartview}%
9997 \fi
9998 \fi
9999 \edef\Hy@temp{%
10000 \ifHy@pdftoolbar\else /HideToolbar true\fi
10001 \ifHy@pdfmenubar\else /HideMenubar true\fi
10002 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10003 \ifHy@pdfwindow /FitWindow true\fi
10004 \ifHy@pdfcenterwindow /CenterWindow true\fi
10005 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10006 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10007 \Hy@UseNameKey{Direction}\@pdfdirection
10008 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10009 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10010 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10011 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10012 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10013 \Hy@UseNameKey{Duplex}\@pdfduplex
10014 \ifx\@pdfpicktraybypdfsize\@empty
10015 \else
10016 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10017 \fi
10018 \ifx\@pdfprintpagerange\@empty
10019 \else
10020 /PrintPageRange[\@pdfprintpagerange]%
10021 \fi
10022 \ifx\@pdfnumcopies\@empty
10023 \else
10024 /NumCopies \@pdfnumcopies
10025 \fi
10026 }%
10027 \pdfcatalog{%
10028 \ifx\Hy@temp\@empty
10029 \else
10030 /ViewerPreferences<<\Hy@temp>>%
10031 \fi
10032 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10033 \ifx\@pdflang\relax
10034 \else
10035 /Lang(\@pdflang)%
10036 \fi
10037 }%
10038 }

```

\PDF@FinishDoc

```

10039 \def\PDF@FinishDoc{%
10040 \pdf@ifdraftmode{}{%
10041 \Hy@UseMaketitleInfos

```

```

10042 \HyInfo@GenerateAddons
10043 \pdfinfo{%
10044   /Author(\@pdfauthor)%
10045   /Title(\@pdftitle)%
10046   /Subject(\@pdfsubject)%
10047   /Creator(\@pdfcreator)%
10048   \ifx\@pdfcreationdate\@empty
10049   \else
10050     /CreationDate(\@pdfcreationdate)%
10051   \fi
10052   \ifx\@pdfmoddate\@empty
10053   \else
10054     /ModDate(\@pdfmoddate)%
10055   \fi
10056   \ifx\@pdfproducer\relax
10057   \else
10058     /Producer(\@pdfproducer)%
10059   \fi
10060   /Keywords(\@pdfkeywords)%
10061   \ifx\@pdftrapped\@empty
10062   \else
10063     /Trapped/\@pdftrapped
10064   \fi
10065   \HyInfo@Addons
10066 }%
10067 }%
10068 \Hy@DisableOption{pdfauthor}%
10069 \Hy@DisableOption{pdftitle}%
10070 \Hy@DisableOption{pdfsubject}%
10071 \Hy@DisableOption{pdfcreator}%
10072 \Hy@DisableOption{addtopdfcreator}%
10073 \Hy@DisableOption{pdfcreationdate}%
10074 \Hy@DisableOption{pdfmoddate}%
10075 \Hy@DisableOption{pdfproducer}%
10076 \Hy@DisableOption{pdfkeywords}%
10077 \Hy@DisableOption{pdftrapped}%
10078 \Hy@DisableOption{pdfinfo}%
10079 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10080 \def\hyper@pagetransition{%
10081   \ifx\@pdfpagetransition\relax
10082   \else
10083     \expandafter\Hy@RemoveTransPageAttr
10084     \the\pdfpageattr^^J/Trans{}}>>\END
10085   \ifx\@pdfpagetransition\@empty
10086   \else
10087     \edef\@processme{%
10088       \global\pdfpageattr{%
10089         \the\pdfpageattr
10090         ^^J/Trans << /S /\@pdfpagetransition\space >>%
10091       }%
10092     }%
10093     \@processme
10094   \fi

```

```
10095 \fi
10096 }
```

`\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.

```
10097 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10098 \ifx\#2\%
10099 \global\pdfpageattr{#1}%
10100 \else
10101 \Hy@RemoveTransPageAttr#1#4\END
10102 \fi
10103 }
```

`\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`.

```
10104 \def\hyper@pageduration{%
10105 \ifx\@pdfpageduration\relax
10106 \else
10107 \expandafter
10108 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10109 \ifx\@pdfpageduration\@empty
10110 \else
10111 \edef\@processme{%
10112 \global\pdfpageattr{%
10113 \the\pdfpageattr
10114 ^^J/Dur \@pdfpageduration\space
10115 }%
10116 }%
10117 \@processme
10118 \fi
10119 \fi
10120 }
```

`\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.

```
10121 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10122 \ifx\#2\%
10123 \global\pdfpageattr{#1}%
10124 \else
10125 \Hy@RemoveDurPageAttr#1#4\END
10126 \fi
10127 }
```

`\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).

```
10128 \def\hyper@pagehidden{%
10129 \ifHy@useHidKey
10130 \expandafter
10131 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
```



```

10132 \ifHy@pdfpagehidden
10133 \edef\@processme{%
10134   \global\pdfpageattr{%
10135     \the\pdfpageattr
10136     ^^J/Hid true % SPACE
10137   }%
10138 }%
10139 \@processme
10140 \fi
10141 \fi
10142 }

```

`\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.

```

10143 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10144   \ifx\\#2\\%
10145     \global\pdfpageattr{#1}%
10146   \else
10147     \Hy@RemoveHidPageAttr#1#4\END
10148   \fi
10149 }

10150 \pdf@ifdraftmode{}{%
10151   \g@addto@macro\Hy@EveryPageHook{%
10152     \hyper@pagetransition
10153     \hyper@pageduration
10154     \hyper@pagehidden
10155   }%
10156 }

```

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

```

10157 </pdftex>
10158 <*pdftex | xetex>
10159 \Hy@AtBeginDocument{%
10160   \ifHy@setpagesize
10161     \expandafter\@firstofone
10162   \else
10163     \expandafter\@gobble
10164   \fi
10165   {%
10166     \@ifclassloaded{seminar}{%
10167 <*pdftex>
10168       \setlength{\pdfhorigin}{1truein}%
10169       \setlength{\pdfvorigin}{1truein}%
10170 </pdftex>
10171     \ifportrait
10172       \ifdim\paperwidth=\z@
10173       \else
10174         \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10175       \fi
10176       \ifdim\paperheight=\z@
10177       \else
10178         \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10179       \fi
10180     \else

```

```

10181 \ifdim\paperheight=\z@
10182 \else
10183 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10184 \fi
10185 \ifdim\paperwidth=\z@
10186 \else
10187 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10188 \fi
10189 \fi
10190 }{%
10191 \ltx@ifundefined{stockwidth}{%
10192 \ifdim\paperwidth>\z@
10193 \setlength{\pdfpagewidth}{\paperwidth}%
10194 \fi
10195 \ifdim\paperheight>\z@
10196 \setlength{\pdfpageheight}{\paperheight}%
10197 \fi
10198 }{%
10199 \ifdim\stockwidth>\z@
10200 \setlength{\pdfpagewidth}{\stockwidth}%
10201 \fi
10202 \ifdim\stockheight>\z@
10203 \setlength{\pdfpageheight}{\stockheight}%
10204 \fi
10205 }%
10206 }%
10207 }%
10208 \Hy@DisableOption{setpagesize}%
10209 }
10210 </pdfTeX | xetex>
10211 <*pdfTeX>
10212 \def\Acrobatmenu#1#2{%
10213 \Hy@Acrobatmenu{#1}{#2}{%
10214 \leavevmode
10215 \EdefEscapeName\Hy@temp@menu{#1}%
10216 \pdfstartlink
10217 attr{%
10218 \Hy@setpdfborder
10219 \Hy@setpdfhighlight
10220 \ifx\@menubordercolor\relax
10221 \else
10222 /C[\@menubordercolor]%
10223 \fi
10224 }%
10225 user{%
10226 /Subtype/Link%
10227 \ifHy@pdfa /F 4\fi
10228 /A<<%
10229 /S/Named%
10230 /N/\Hy@temp@menu
10231 \Hy@href@nextactionraw
10232 >>%
10233 }%
10234 \relax
10235 \Hy@colorlink\@menucolor#2%
10236 \close@pdflink
10237 }%

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_T_EX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdf_T_EX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package 'atbegshi' `\AtBeginShipoutFirst` does not add a additional box layer.

```

10239 \def\Hy@FixNotFirstPage{%
10240   \gdef\Hy@FixNotFirstPage{%
10241     \setbox\AtBeginShipoutBox=\hbox{%
10242       \copy\AtBeginShipoutBox
10243     }%
10244   }%
10245 }
10246 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10247 }{%
10248   \AtBeginShipout{\Hy@FixNotFirstPage}%
10249 }
10250 \</pdfTeX>

```

47.3 hypertext

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

href: html:

name: html:

end: html:

image: html:

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

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

The *href* and *name* commands must be paired with an *end* command later in the _T_EX file — the _T_EX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a *name* command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the *name* command) or as part of a URL (of

the form *URL#name_string*). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10251 (*hypertext)
10252 \providecommand*\XR@ext}{dvi}
10253 \let\PDF@FinishDoc\ltx@empty
10254 \def\PDF@SetupDoc{%
10255   \ifx\@baseurl\@empty
10256   \else
10257     \special{html:<base href="\@baseurl">}%
10258   \fi
10259 }
10260 \Hy@WrapperDef\hyper@anchor#1{%
10261   \Hy@SaveLastskip
10262   \Hy@VerboseAnchor{#1}%
10263   \begingroup
10264     \let\protect=\string
10265     \hyper@chars
10266     \special{html:<a name=%
10267       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10268   \endgroup
10269   \Hy@activeanchortrue
10270   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10271   \special{html:</a>}%
10272   \Hy@activeanchorfalse
10273   \Hy@RestoreLastskip
10274 }
10275 \Hy@WrapperDef\hyper@anchorstart#1{%
10276   \Hy@SaveLastskip
10277   \Hy@VerboseAnchor{#1}%
10278   \begingroup
10279     \hyper@chars
10280     \special{html:<a name=%
10281       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10282   \endgroup
10283   \Hy@activeanchortrue
10284 }
10285 \def\hyper@anchorend{%
10286   \special{html:</a>}%
10287   \Hy@activeanchorfalse
10288   \Hy@RestoreLastskip
10289 }
10290 \def\@urltype{url}
10291 \def\hyper@linkstart#1#2{%
10292   \Hy@VerboseLinkStart{#1}{#2}%
10293   \expandafter\Hy@colorlink\csname @#1color\endcsname
10294   \def\Hy@tempa{#1}%
10295   \ifx\Hy@tempa\@urltype
10296     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10297   \else
10298     \begingroup
10299       \hyper@chars
10300       \special{html:<a href=%
10301         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10302     \endgroup
10303   \fi

```

```

10304 }
10305 \def\hyper@linkend{%
10306   \special{html:</a>}%
10307   \Hy@endcolorlink
10308 }
10309 \def\hyper@linkfile#1#2#3{%
10310   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10311 }
10312 \def\hyper@linkurl#1#2{%

```

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

```

10313   \leavevmode
10314   \ifHy@raiselinks
10315     \Hy@SaveSpaceFactor
10316     \Hy@SaveSavedSpaceFactor
10317     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10318     \Hy@RestoreSavedSpaceFactor
10319     \@linkdim\dp\@tempboxa
10320     \lower\@linkdim\hbox{%
10321       \hyper@chars
10322       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10323     }%
10324     \Hy@colorlink\@urlcolor
10325     \Hy@RestoreSpaceFactor
10326     #1%
10327     \Hy@SaveSpaceFactor
10328     \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvilhs processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

10329   \advance\@linkdim by -6.5\p@
10330   \raise\@linkdim\hbox{\special{html:</a>}}%
10331   \Hy@endcolorlink
10332   \Hy@RestoreSpaceFactor
10333 \else
10334   \begingroup
10335     \hyper@chars
10336     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10337     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10338     \special{html:</a>}%
10339     \Hy@endcolorlink
10340   \endgroup
10341 \fi
10342 }

```

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

```

10343 \def\hyper@link#1#2#3{%
10344   \Hy@VerboseLinkStart{#1}{#2}%
10345   \hyper@linkurl{#3}{\##\Hy@DestNameFilter{#2}}%
10346 }
10347 \def\hyper@image#1#2{%
10348   \begingroup
10349     \hyper@chars
10350     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10351   \endgroup

```

```

10352 }
10353 </hypertex>
10354 <*dviwindo>

```

47.4 dviwindo

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

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

```

10355 \providecommand*\XR@ext}{dvi}
10356 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10357 \Hy@WrapperDef\hyper@anchor#1{%
10358   \Hy@SaveLastskip
10359   \Hy@VerboseAnchor{#1}%
10360   \begingroup
10361     \let\protect=\string
10362     \special{mark: #1}%
10363   \endgroup
10364   \Hy@activeanchortrue
10365   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10366   \Hy@activeanchorfalse
10367   \Hy@RestoreLastskip
10368 }
10369 \Hy@WrapperDef\hyper@anchorstart#1{%
10370   \Hy@SaveLastskip
10371   \Hy@VerboseAnchor{#1}%
10372   \special{mark: #1}%
10373   \Hy@activeanchortrue
10374 }
10375 \def\hyper@anchorend{%
10376   \Hy@activeanchorfalse
10377   \Hy@RestoreLastskip
10378 }
10379 \def\hyper@linkstart#1#2{%
10380   \Hy@VerboseLinkStart{#1}{#2}%
10381   \expandafter\Hy@colorlink\csname @#1color\endcsname
10382   \special{button: %
10383     10000000 %
10384     \number\baselineskip\space
10385     #2%
10386   }%
10387 }
10388 \def\hyper@linkend{%
10389   \Hy@endcolorlink
10390 }
10391 \def\hyper@link#1#2#3{%
10392   \Hy@VerboseLinkStart{#1}{#2}%
10393   \leavevmode

```

```

10394 \ifHy@raiselinks
10395 \Hy@SaveSpaceFactor
10396 \Hy@SaveSavedSpaceFactor
10397 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10398 \Hy@RestoreSavedSpaceFactor
10399 \@linkdim\dp\@tempboxa
10400 \lower\@linkdim\hbox{%
10401 \special{button: %
10402 \number\wd\@tempboxa\space
10403 \number\ht\@tempboxa\space
10404 #2%
10405 }%
10406 \expandafter\Hy@colorlink\csname @#1color\endcsname
10407 \Hy@RestoreSpaceFactor
10408 #3\Hy@xspace@end
10409 \Hy@SaveSpaceFactor
10410 \Hy@endcolorlink
10411 }%
10412 \@linkdim\ht\@tempboxa
10413 \advance\@linkdim by -6.5\p@
10414 \raise\@linkdim\hbox{}%
10415 \Hy@RestoreSpaceFactor
10416 \else
10417 \special{button: %
10418 \number\wd\@tempboxa\space
10419 \number\ht\@tempboxa\space
10420 #2%
10421 }%
10422 \expandafter\Hy@colorlink\csname @#1color\endcsname
10423 #3\Hy@xspace@end
10424 \Hy@endcolorlink
10425 \fi
10426 }
10427 \def\hyper@linkurl#1#2{%
10428 \begingroup
10429 \hyper@chars
10430 \leavevmode
10431 \ifHy@raiselinks
10432 \Hy@SaveSpaceFactor
10433 \Hy@SaveSavedSpaceFactor
10434 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10435 \Hy@RestoreSavedSpaceFactor
10436 \@linkdim\dp\@tempboxa
10437 \lower\@linkdim\hbox{%
10438 \special{button: %
10439 \number\wd\@tempboxa\space
10440 \number\ht\@tempboxa\space
10441 launch: \wwwbrowser\space
10442 #2%
10443 }%
10444 \Hy@colorlink\@urlcolor
10445 \Hy@RestoreSpaceFactor
10446 #1\Hy@xspace@end
10447 \Hy@SaveSpaceFactor
10448 \Hy@endcolorlink
10449 }%
10450 \@linkdim\ht\@tempboxa

```

```

10451 \advance\@linkdim by -6.5\p@
10452 \raise\@linkdim\hbox{}%
10453 \Hy@RestoreSpaceFactor
10454 \else
10455 \special{button: %
10456 \number\wd\@tempboxa\space
10457 \number\ht\@tempboxa\space
10458 launch: \wwwbrowser\space
10459 #2%
10460 }%
10461 \Hy@colorlink\@urlcolor
10462 #1\Hy@xspace@end
10463 \Hy@endcolorlink
10464 \fi
10465 \endgroup
10466 }
10467 \def\hyper@linkfile#1#2#3{%
10468 \begingroup
10469 \hyper@chars
10470 \leavevmode
10471 \ifHy@raiselinks
10472 \Hy@SaveSpaceFactor
10473 \Hy@SaveSavedSpaceFactor
10474 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10475 \Hy@RestoreSavedSpaceFactor
10476 \@linkdim\dp\@tempboxa
10477 \lower\@linkdim\hbox{%
10478 \special{button: %
10479 \number\wd\@tempboxa\space
10480 \number\ht\@tempboxa\space
10481 #3,%
10482 file: #2%
10483 }%
10484 \Hy@colorlink\@filecolor
10485 \Hy@RestoreSpaceFactor
10486 #1\Hy@xspace@end
10487 \Hy@SaveSpaceFactor
10488 \Hy@endcolorlink
10489 }%
10490 \@linkdim\ht\@tempboxa
10491 \advance\@linkdim by -6.5\p@
10492 \raise\@linkdim\hbox{}%
10493 \Hy@RestoreSpaceFactor
10494 \else
10495 \special{button: %
10496 \number\wd\@tempboxa\space
10497 \number\ht\@tempboxa\space
10498 #3,%
10499 file: #2%
10500 }%
10501 \Hy@colorlink\@filecolor
10502 #1\Hy@xspace@end
10503 \Hy@endcolorlink
10504 \fi
10505 \endgroup
10506 }
10507 \HyInfo@AddonUnsupportedtrue

```



```

10508 \def\PDF@FinishDoc{%
10509   \Hy@UseMaketitleInfos
10510   \HyInfo@TrappedUnsupported
10511   \special{PDF: Keywords \@pdfkeywords}%
10512   \special{PDF: Title \@pdftitle}%
10513   \special{PDF: Creator \@pdfcreator}%
10514   \ifx\@pdfcreationdate\@empty
10515   \else
10516     \special{PDF: CreationDate \@pdfcreationdate}%
10517   \fi
10518   \ifx\@pdfmoddate\@empty
10519   \else
10520     \special{PDF: ModDate \@pdfmoddate}%
10521   \fi
10522   \special{PDF: Author \@pdfauthor}%
10523   \ifx\@pdfproducer\relax
10524   \else
10525     \special{PDF: Producer \@pdfproducer}%
10526   \fi
10527   \special{PDF: Subject \@pdfsubject}%
10528   \Hy@DisableOption{pdfauthor}%
10529   \Hy@DisableOption{pdftitle}%
10530   \Hy@DisableOption{pdfsubject}%
10531   \Hy@DisableOption{pdfcreator}%
10532   \Hy@DisableOption{addtopdfcreator}%
10533   \Hy@DisableOption{pdfcreationdate}%
10534   \Hy@DisableOption{pdfcreationdate}%
10535   \Hy@DisableOption{pdfmoddate}%
10536   \Hy@DisableOption{pdfproducer}%
10537   \Hy@DisableOption{pdfkeywords}%
10538   \Hy@DisableOption{pdftrapped}%
10539   \Hy@DisableOption{pdfinfo}%
10540 }
10541 \def\PDF@SetupDoc{%
10542   \ifx\@baseurl\@empty
10543   \else
10544     \special{PDF: Base \@baseurl}%
10545   \fi
10546   \ifx\@pdfpagescrop\@empty\else
10547     \special{PDF: BBox \@pdfpagescrop}%
10548   \fi
10549   \def\Hy@temp{}%
10550   \ifx\@pdfstartpage\@empty
10551   \else
10552     \ifx\@pdfstartview\@empty
10553     \else
10554       \edef\Hy@temp{%
10555         ,Page=\@pdfstartpage
10556         ,View=\@pdfstartview
10557       }%
10558     \fi
10559   \fi
10560   \edef\Hy@temp{%
10561     \noexpand\pdfmark{%
10562       pdfmark=/DOCVIEW,%
10563       PageMode=/\@pdfpagemode
10564     }\Hy@temp

```

```

10565 }%
10566 }%
10567 \Hy@temp
10568 \ifx\@pdfpagescrop\@empty
10569 \else
10570 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10571 \fi
10572 \edef\Hy@temp{%
10573 \ifHy@pdftoolbar\else /HideToolbar true\fi
10574 \ifHy@pdfmenubar\else /HideMenubar true\fi
10575 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10576 \ifHy@pdfwindow /FitWindow true\fi
10577 \ifHy@pdfcenterwindow /CenterWindow true\fi
10578 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10579 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10580 \Hy@UseNameKey{Direction}\@pdfdirection
10581 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10582 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10583 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10584 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10585 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10586 \Hy@UseNameKey{Duplex}\@pdfduplex
10587 \ifx\@pdfpicktraybypdfsize\@empty
10588 \else
10589 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10590 \fi
10591 \ifx\@pdfprintpagerange\@empty
10592 \else
10593 /PrintPageRange[\@pdfprintpagerange]%
10594 \fi
10595 \ifx\@pdfnumcopies\@empty
10596 \else
10597 /NumCopies \@pdfnumcopies
10598 \fi
10599 }%
10600 \pdfmark{pdfmark=/PUT,%
10601 Raw={%
10602 \string{Catalog\string}<<%
10603 \ifx\Hy@temp\@empty
10604 \else
10605 /ViewerPreferences<<\Hy@temp>>%
10606 \fi
10607 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10608 \ifx\@pdflang\relax
10609 \else
10610 /Lang(\@pdflang)%
10611 \fi
10612 >>%
10613 }%
10614 }%
10615 }
10616 </dviwindo>
10617 <{*dvipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10618 \providecommand*{\XR@ext}{pdf}
10619 \Hy@setbreaklinks{true}
10620 \def\HyPat@ObjRef{%
10621   @[\^ ]+{%
10622 }
10623 \newsavebox{\pdfm@box}
10624 \def\@pdfm@mark#1{\special{pdf:#1}}
10625 \Hy@WrapperDef\@pdfm@dest#1{%
10626   \Hy@SaveLastskip
10627   \Hy@VerboseAnchor{#1}%
10628   \begingroup
10629     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10630     \def\x{XYZ}%
10631     \ifx\x\@pdfview
10632       \def\x{XYZ @xpos @ypos null}%
10633     \else
10634       \def\x{FitH}%
10635       \ifx\x\@pdfview
10636         \def\x{FitH @ypos}%
10637       \else
10638         \def\x{FitBH}%
10639         \ifx\x\@pdfview
10640           \def\x{FitBH @ypos}%
10641         \else
10642           \def\x{FitV}%
10643           \ifx\x\@pdfview
10644             \def\x{FitV @xpos}%
10645           \else
10646             \def\x{FitBV}%
10647             \ifx\x\@pdfview
10648               \def\x{FitBV @xpos}%
10649             \else
10650               \def\x{Fit}%
10651               \ifx\x\@pdfview
10652                 \let\x\@pdfview
10653               \else
10654                 \def\x{FitB}%
10655                 \ifx\x\@pdfview
10656                   \let\x\@pdfview
10657                 \else
10658                   \def\x{FitR}%
10659                   \ifx\x\@pdfview
10660                     \Hy@Warning{'\pdfview=FitR' is not supported}%
10661                     \def\x{XYZ @xpos @ypos null}%
10662                   \else
10663                     \@onelevel@sanitize\@pdfview
10664                     \Hy@Warning{%
10665                       Unknown value '\@pdfview' for pdfview%
10666                     }%
10667                     \def\x{XYZ @xpos @ypos null}%
10668                   \fi
10669                 \fi
10670               \fi
10671             \fi
10672           \fi
10673         \fi
10674       \fi

```

```

10675 \fi
10676 \pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10677 \endgroup
10678 \Hy@RestoreLastskip
10679 }
10680 \providecommand*\pdfview{XYZ}
10681 \providecommand*\pdfborder{0 0 1}
10682 \providecommand*\pdfborderstyle{}
10683 \def\hyper@anchor#1{%
10684 \pdfm@dest{#1}%
10685 }
10686 \def\hyper@anchorstart#1{%
10687 \Hy@activeanchortrue
10688 \pdfm@dest{#1}%
10689 }
10690 \def\hyper@anchorend{%
10691 \Hy@activeanchorfalse
10692 }
10693 \newcounter{Hy@AnnotLevel}
10694 \ifHy@ocgcolorlinks
10695 \def\OBJ@OCG@view{@OCG@view}%
10696 \pdfm@mark{%
10697 obj \OBJ@OCG@view <<%
10698 /Type/OCG%
10699 /Name(View)%
10700 /Usage<<%
10701 /Print<<%
10702 /PrintState/OFF%
10703 >>%
10704 /View<<%
10705 /ViewState/ON%
10706 >>%
10707 >>%
10708 >>%
10709 }%
10710 \pdfm@mark{close \OBJ@OCG@view}%
10711 \def\OBJ@OCG@print{@OCG@print}%
10712 \pdfm@mark{%
10713 obj \OBJ@OCG@print <<%
10714 /Type/OCG%
10715 /Name(Print)%
10716 /Usage<<%
10717 /Print<<%
10718 /PrintState/ON%
10719 >>%
10720 /View<<%
10721 /ViewState/OFF%
10722 >>%
10723 >>%
10724 >>%
10725 }%
10726 \pdfm@mark{close \OBJ@OCG@print}%
10727 \def\OBJ@OCGs{@OCGs}%
10728 \pdfm@mark{%
10729 obj \OBJ@OCGs [%
10730 \OBJ@OCG@view\space\OBJ@OCG@print
10731 ]%

```

```

10732 }%
10733 \@pdfm@mark{close \OBJ@OCGs}%
10734 \@pdfm@mark{%
10735     put @catalog <<%
10736     /OCProperties<<%
10737     /OCGs \OBJ@OCGs
10738     /D<<%
10739     /OFF[\OBJ@OCG@print]%
10740     /AS[%
10741     <<%
10742     /Event/View%
10743     /OCGs \OBJ@OCGs
10744     /Category[/View]%
10745     >>%
10746     <<%
10747     /Event/Print%
10748     /OCGs \OBJ@OCGs
10749     /Category[/Print]%
10750     >>%
10751     <<%
10752     /Event/Export%
10753     /OCGs \OBJ@OCGs
10754     /Category[/Print]%
10755     >>%
10756     ]%
10757     >>%
10758     >>%
10759     >>%
10760 }%
10761 \AtBeginShipout{%
10762     \setbox\AtBeginShipoutBox=\hbox{%
10763         \copy\AtBeginShipoutBox
10764         \@pdfm@mark{%
10765             put @resources <<%
10766             /Properties<<%
10767             /OCView \OBJ@OCG@view
10768             /OCPrint \OBJ@OCG@print
10769             >>%
10770             >>%
10771         }%
10772     }%
10773 }%
10774 \Hy@AtBeginDocument{%
10775     \def\Hy@colorlink#1{%
10776         \begingroup
10777         \ifHy@ocgcolorlinks
10778             \def\Hy@ocgcolor{#1}%
10779             \setbox0=\hbox\bgroup\color@begingroup
10780         \else
10781             \HyColor@UseColor#1%
10782         \fi
10783     }%
10784     \def\Hy@endcolorlink{%
10785         \ifHy@ocgcolorlinks
10786             \color@endgroup\egroup
10787         \mbox{%
10788             \@pdfm@mark{content /OC/OCPrint BDC}%

```

```

10789      \rlap{\copy0}%
10790      \@pdfm@mark{content EMC/OC/OCView BDC}%
10791      \begingroup
10792        \expandafter\HyColor@UseColor\Hy@ocgcolor
10793        \box0 %
10794      \endgroup
10795      \@pdfm@mark{content EMC}%
10796    }%
10797  \fi
10798  \endgroup
10799 }%
10800 }%
10801 \else
10802   \Hy@DisableOption{ocgcolorlinks}%
10803 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10804 \def\Hy@BeginAnnot#1{%
10805   \global\advance\c@Hy@AnnotLevel\@ne
10806   \ifnum\c@Hy@AnnotLevel=\@ne
10807     #1%
10808   \fi
10809 }
10810 \def\Hy@endAnnot{%
10811   \ifnum\value{Hy@AnnotLevel}=\@ne
10812     \Hy@endcolorlink
10813     \@pdfm@mark{eann}%
10814   \fi
10815   \global\advance\c@Hy@AnnotLevel\m@ne
10816 }
10817 \def\Hy@undefinedname{UNDEFINED}
10818 \def\hyper@linkstart#1#2{%
10819   \Hy@VerboseLinkStart{#1}{#2}%
10820   \leavevmode
10821   \Hy@BeginAnnot{%
10822     \protected@edef\Hy@testname{#2}%
10823     \ifx\Hy@testname\@empty
10824       \Hy@Warning{%
10825         Empty destination name,\MessageBreak
10826         using '\Hy@undefinedname'%
10827       }%
10828     \let\Hy@testname\Hy@undefinedname
10829   \else
10830     \Hy@pstringdef\Hy@testname{%
10831       \expandafter\HyperDestNameFilter\expandafter{%
10832         \Hy@testname
10833       }%
10834     }%
10835   \fi
10836   \@pdfm@mark{%
10837     bann<<%
10838     /Type/Annot%
10839     /Subtype/Link%
10840     \ifHy@pdfa /F 4\fi
10841     \Hy@setpdfborder
10842     \Hy@setpdfhighlight

```

```

10843     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10844     \else
10845     /C[\csname @#1bordercolor\endcsname]%
10846     \fi
10847     /A<<%
10848     /S/GoTo%
10849     /D(\Hy@testname)%
10850     \Hy@href@nextactionraw
10851     >>%
10852     >>%
10853     }%
10854     \expandafter\Hy@colorlink\csname @#1color\endcsname
10855     }%
10856 }
10857 \def\hyper@linkend{\Hy@EndAnnot}%
10858 \def\hyper@link#1#2#3{%
10859   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10860 }
10861 \def\hyper@linkfile#1#2#3{%
10862   \leavevmode
10863   \Hy@BeginAnnot{%
10864     \def\Hy@pstringF{#2}%
10865     \Hy@CleanupFile\Hy@pstringF
10866     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10867     \Hy@pstringdef\Hy@pstringD{#3}%
10868     \Hy@MakeRemoteAction
10869     \@pdfm@mark{%
10870       bann<<%
10871       /Type/Annot%
10872       /Subtype/Link%
10873       \ifHy@pdfa /F 4\fi
10874       \Hy@setpdfborder
10875       \Hy@setpdfhighlight
10876       \ifx\@filebordercolor\relax
10877       \else
10878       /C[\@filebordercolor]%
10879       \fi
10880       /A<<%
10881       /S/GoToR%
10882       /F(\Hy@pstringF)%
10883       /D%
10884       \ifx\#3\%
10885       [\Hy@href@page\@pdfremotestartview]%
10886       \else
10887       (\Hy@pstringD)%
10888       \fi
10889       \Hy@SetNewWindow
10890       \Hy@href@nextactionraw
10891       >>%
10892       >>%
10893       }%
10894       \Hy@colorlink\@filecolor
10895     }%
10896     #1\Hy@xspace@end
10897     \Hy@EndAnnot
10898 }
10899 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname

```

```

10900 \leavevmode
10901 \Hy@BeginAnnot{%
10902   \Hy@pstringdef\Hy@pstringF{#1}%
10903   \Hy@pstringdef\Hy@pstringP{#3}%
10904   \@pdfm@mark{%
10905     bann<<%
10906     /Type/Annot%
10907     /Subtype/Link%
10908     \ifHy@pdfa /F 4\fi
10909     \Hy@setpdfborder
10910     \Hy@setpdfhighlight
10911     \ifx\@runbordercolor\relax
10912     \else
10913       /C[\@runbordercolor]%
10914     \fi
10915     /A<<%
10916     /F(\Hy@pstringF)%
10917     /S/Launch%
10918     \Hy@SetNewWindow
10919     \ifx\#3\%
10920     \else
10921       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10922     \fi
10923     \Hy@href@nextactionraw
10924     >>%
10925   >>%
10926 }%
10927 \Hy@colorlink\@runcolor
10928 }%
10929 #2\Hy@xspace@end
10930 \Hy@EndAnnot
10931 }
10932 \def\hyper@linkurl#1#2{%
10933 \leavevmode
10934 \Hy@BeginAnnot{%
10935   \Hy@pstringdef\Hy@pstringURI{#2}%
10936   \@pdfm@mark{%
10937     bann<<%
10938     /Type/Annot%
10939     /Subtype/Link%
10940     \ifHy@pdfa /F 4\fi
10941     \Hy@setpdfborder
10942     \Hy@setpdfhighlight
10943     \ifx\@urlbordercolor\relax
10944     \else
10945       /C[\@urlbordercolor]%
10946     \fi
10947     /A<<%
10948     /S/URI%
10949     /URI(\Hy@pstringURI)%
10950     \ifHy@href@ismap
10951     /IsMap true%
10952     \fi
10953     \Hy@href@nextactionraw
10954     >>%
10955   >>%
10956 }%

```



```

10957 \Hy@colorlink\@urlcolor
10958 }%
10959 #1\Hy@xspace@end
10960 \Hy@EndAnnot
10961 }
10962 \def\Acrobatmenu#1#2{%
10963 \Hy@Acrobatmenu{#1}{#2}{%
10964 \Hy@BeginAnnot{%
10965 \EdefEscapeName\Hy@temp@menu{#1}%
10966 \@pdfm@mark{%
10967 bann<<%
10968 /Type/Annot%
10969 /Subtype/Link%
10970 \ifHy@pdfa /F 4\fi
10971 \Hy@setpdfborder
10972 \Hy@setpdfhighlight
10973 \ifx\@menubordercolor\relax
10974 \else
10975 /C[\@menubordercolor]%
10976 \fi
10977 /A<<%
10978 /S/Named%
10979 /N/\Hy@temp@menu
10980 \Hy@href@nextactionraw
10981 >>%
10982 >>%
10983 }%
10984 \Hy@colorlink\@menucolor
10985 }%
10986 #2\Hy@xspace@end
10987 \Hy@EndAnnot
10988 }%
10989 }
10990
10991 \def\PDF@FinishDoc{%
10992 \Hy@UseMaketitleInfos
10993 \HyInfo@GenerateAddons
10994 \@pdfm@mark{%
10995 docinfo<<%
10996 /Title(\@pdftitle)%
10997 /Subject(\@pdfsubject)%
10998 /Creator(\@pdfcreator)%
10999 \ifx\@pdfcreationdate\@empty
11000 \else
11001 /CreationDate(\@pdfcreationdate)%
11002 \fi
11003 \ifx\@pdfmoddate\@empty
11004 \else
11005 /ModDate(\@pdfmoddate)%
11006 \fi
11007 /Author(\@pdfauthor)%
11008 \ifx\@pdfproducer\relax
11009 \else
11010 /Producer(\@pdfproducer)%
11011 \fi
11012 /Keywords(\@pdfkeywords)%
11013 \ifx\@pdftrapped\@empty

```

```

11014     \else
11015         /Trapped/\@pdftrapped
11016     \fi
11017     \HyInfo@Addons
11018     >>%
11019 }%
11020 \Hy@DisableOption{pdfauthor}%
11021 \Hy@DisableOption{pdftitle}%
11022 \Hy@DisableOption{pdfsubject}%
11023 \Hy@DisableOption{pdfcreator}%
11024 \Hy@DisableOption{addtopdfcreator}%
11025 \Hy@DisableOption{pdfcreationdate}%
11026 \Hy@DisableOption{pdfcreationdate}%
11027 \Hy@DisableOption{pdfmoddate}%
11028 \Hy@DisableOption{pdfproducer}%
11029 \Hy@DisableOption{pdfkeywords}%
11030 \Hy@DisableOption{pdftrapped}%
11031 \Hy@DisableOption{pdfinfo}%
11032 }

11033 \def\PDF@SetupDoc{%
11034     \edef\Hy@temp{%
11035         \ifHy@pdftoolbar\else /HideToolbar true\fi
11036         \ifHy@pdfmenubar\else /HideMenubar true\fi
11037         \ifHy@pdfwindowui\else /HideWindowUI true\fi
11038         \ifHy@pdfwindow /FitWindow true\fi
11039         \ifHy@pdfcenterwindow /CenterWindow true\fi
11040         \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11041         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11042         \Hy@UseNameKey{Direction}\@pdfdirection
11043         \Hy@UseNameKey{ViewArea}\@pdfviewarea
11044         \Hy@UseNameKey{ViewClip}\@pdfviewclip
11045         \Hy@UseNameKey{PrintArea}\@pdfprintarea
11046         \Hy@UseNameKey{PrintClip}\@pdfprintclip
11047         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11048         \Hy@UseNameKey{Duplex}\@pdfduplex
11049         \ifx\@pdfpicktraybypdfsize\@empty
11050             \else
11051                 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11052             \fi
11053         \ifx\@pdfprintpagerange\@empty
11054             \else
11055                 /PrintPageRange[\@pdfprintpagerange]%
11056             \fi
11057         \ifx\@pdfnumcopies\@empty
11058             \else
11059                 /NumCopies \@pdfnumcopies
11060             \fi
11061     }%
11062     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11063     \@pdfm@mark{%
11064         docview<<%
11065         \ifx\@pdfstartpage\@empty
11066             \else
11067                 \ifx\@pdfstartview\@empty
11068                     \else
11069                         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11070                     \fi

```

```

11071 \fi
11072 \ifx\@baseurl\@empty
11073 \else
11074 /URI<</Base(\Hy@pstringB)>>%
11075 \fi
11076 /PageMode/\@pdfpagemode
11077 \ifx\Hy@temp\@empty
11078 \else
11079 /ViewerPreferences<<\Hy@temp>>%
11080 \fi
11081 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11082 \ifx\@pdflang\relax
11083 \else
11084 /Lang(\@pdflang)%
11085 \fi
11086 >>%
11087 }%
11088 \ifx\@pdfpagescrop\@empty
11089 \else
11090 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11091 \fi
11092 }
11093 </dvipdfm | xetex>
11094 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11095 \def\hyper@pagetransition{%
11096 \ifx\@pdfpagetransition\relax
11097 \else
11098 \ifx\@pdfpagetransition\@empty
11099 \else
11100 \special{pdf:put @thispage %
11101 <</Trans<</S/\@pdfpagetransition>>>>%
11102 }%
11103 \fi
11104 \fi
11105 }

```

\hyper@pageduration

```

11106 \def\hyper@pageduration{%
11107 \ifx\@pdfpageduration\relax
11108 \else
11109 \ifx\@pdfpageduration\@empty
11110 \else
11111 \special{pdf:put @thispage %
11112 <</Dur \@pdfpageduration>>>>%
11113 }%
11114 \fi
11115 \fi
11116 }

```

\hyper@pagehidden

```

11117 \def\hyper@pagehidden{%
11118 \ifHy@useHidKey
11119 \special{pdf:put @thispage %
11120 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11121 }%

```

```

11122 \fi
11123 }

11124 \g@addto@macro\Hy@EveryPageBoxHook{%
11125 \hyper@pagetransition
11126 \hyper@pageduration
11127 \hyper@pagehidden
11128 }

11129 </dvipdfm | xetex>

```

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

```

11130 <*dvipdfm>
11131 \AtBeginShipoutFirst{%
11132 \ifHy@setpagesize
11133 \begingroup
11134 \ifundefined{stockwidth}{%
11135 \ifdim\paperwidth>\z@
11136 \ifdim\paperheight>\z@
11137 \special{papersize=\the\paperwidth,\the\paperheight}%
11138 \fi
11139 \fi
11140 }{%
11141 \ifdim\stockwidth>\z@
11142 \ifdim\stockheight>\z@
11143 \special{papersize=\the\stockwidth,\the\stockheight}%
11144 \fi
11145 \fi
11146 }%
11147 \endgroup
11148 \fi
11149 \Hy@DisableOption{setpagesize}%
11150 }
11151 </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.

```

11152 <*vtexhtml>
11153 \providecommand*\XR@ext}{htm}
11154 \RequirePackage{vtexhtml}
11155 \newif\if@Localurl
11156 \let\PDF@FinishDoc\ltx@empty
11157 \def\PDF@SetupDoc{%
11158 \ifx\@baseurl\@empty
11159 \else
11160 \special{!direct <base href="\@baseurl">}%
11161 \fi
11162 }
11163 \def\@urltype{url}
11164 \def\hyper@link#1#2#3{%
11165 \Hy@VerboseLinkStart{#1}{#2}%
11166 \leavevmode
11167 \special{!direct <a href=%
11168 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11169 #3\Hy@xspace@end

```

```

11170 \special{!direct </a>}%
11171 }
11172 \def\hyper@linkurl#1#2{%
11173 \begingroup
11174 \hyper@chars
11175 \leavevmode
11176 \MathBSuppress=1\relax
11177 \special{!direct <a href=%
11178 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11179 #1\Hy@xspace@end
11180 \MathBSuppress=0\relax
11181 \special{!direct </a>}%
11182 \endgroup
11183 }
11184 \def\hyper@linkfile#1#2#3{%
11185 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11186 }
11187 \def\hyper@linkstart#1#2{%
11188 \Hy@VerboseLinkStart{#1}{#2}%
11189 \def\Hy@tempa{#1}\ifx\Hy@tempa \@urlltype
11190 \@Localurltrue
11191 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11192 \else
11193 \@Localurlfalse
11194 \begingroup
11195 \hyper@chars
11196 \special{!aref \HyperDestNameFilter{#2}}%
11197 \endgroup
11198 \fi
11199 }
11200 \def\hyper@linkend{%
11201 \if@Localurl
11202 \special{!endaref}%
11203 \else
11204 \special{!direct </a>}%
11205 \fi
11206 }
11207 \Hy@WrapperDef\hyper@anchorstart#1{%
11208 \Hy@SaveLastskip
11209 \Hy@VerboseAnchor{#1}%
11210 \begingroup
11211 \hyper@chars
11212 \special{!aname #1}%
11213 \special{!direct <a name=%
11214 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11215 \endgroup
11216 \Hy@activeanchortrue
11217 }
11218 \def\hyper@anchorend{%
11219 \special{!direct </a>}%
11220 \Hy@activeanchorfalse
11221 \Hy@RestoreLastskip
11222 }
11223 \Hy@WrapperDef\hyper@anchor#1{%
11224 \Hy@SaveLastskip
11225 \Hy@VerboseAnchor{#1}%
11226 \begingroup

```

```

11227 \let\protect=\string
11228 \hyper@chars
11229 \leavevmode
11230 \special{!aname #1}%
11231 \special{!direct <a name=%
11232 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11233 \endgroup
11234 \Hy@activeanchortrue
11235 \bgroup\anchor@spot\egroup
11236 \special{!direct </a>}}%
11237 \Hy@activeanchorfalse
11238 \Hy@RestoreLastskip
11239 }
11240 \def\@Form[#1]{%
11241 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11242 }
11243 \let\@endForm\ltx@empty
11244 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11245 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11246 }
11247 \def\@TextField[#1]#2{% parameters, label
11248 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11249 }
11250 \def\@CheckBox[#1]#2{% parameters, label
11251 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11252 }
11253 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11254 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11255 }
11256 \def\@PushButton[#1]#2{% parameters, label
11257 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11258 }
11259 \def\@Reset[#1]#2{%
11260 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11261 }
11262 \def\@Submit[#1]#2{%
11263 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11264 }
11265 </vtexhtml>
11266 < *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.

```

11267 \ifx\mediaheight\@undefined
11268 \else
11269 \ifx\mediaheight\relax
11270 \else
11271 \ifHy@setpagesize
11272 \providecommand*{\VTeXInitMediaSize}{%
11273 \ltx@ifundefined{stockwidth}{%
11274 \ifdim\paperheight>0pt %
11275 \setlength\mediaheight\paperheight
11276 \fi
11277 \ifdim\paperheight>0pt %
11278 \setlength\mediawidth\paperwidth
11279 \fi

```

```

11280     }{%
11281         \ifdim\stockheight>0pt %
11282             \setlength\mediaheight\stockheight
11283         \fi
11284         \ifdim\stockwidth>0pt %
11285             \setlength\mediawidth\stockwidth
11286         \fi
11287     }%
11288 }%
11289 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11290 \fi
11291 \Hy@DisableOption{setpagesize}%
11292 \fi
11293 \fi

```

Older versions of VTeX require xyz in lower case.

```

11294 \providecommand*\@pdfview{xyz}
11295 \providecommand*\@pdfborder{0 0 1}
11296 \providecommand*\@pdfborderstyle{}
11297 \let\CurrentBorderColor\@linkbordercolor
11298 \Hy@WrapperDef\hyper@anchor#1{%
11299     \Hy@SaveLastskip
11300     \Hy@VerboseAnchor{#1}%
11301     \begingroup
11302         \let\protect=\string
11303         \hyper@chars
11304         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11305     \endgroup
11306     \Hy@activeanchortrue
11307     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11308     \Hy@activeanchorfalse
11309     \Hy@RestoreLastskip
11310 }
11311 \Hy@WrapperDef\hyper@anchorstart#1{%
11312     \Hy@SaveLastskip
11313     \Hy@VerboseAnchor{#1}%
11314     \begingroup
11315         \hyper@chars
11316         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11317     \endgroup
11318     \Hy@activeanchortrue
11319 }
11320 \def\hyper@anchorend{%
11321     \Hy@activeanchorfalse
11322     \Hy@RestoreLastskip
11323 }
11324 \def\@urltype{url}
11325 \def\Hy@undefinedname{UNDEFINED}
11326 \def\hyper@linkstart#1#2{%
11327     \Hy@VerboseLinkStart{#1}{#2}%
11328     \Hy@pstringdef\Hy@pstringURI{#2}%
11329     \expandafter\Hy@colorlink\csname @#1color\endcsname
11330     \ltx@ifundefined{#1bordercolor}{%
11331         \let\CurrentBorderColor\relax
11332     }{%
11333         \edef\CurrentBorderColor{%
11334             \csname @#1bordercolor\endcsname
11335         }%

```

```

11336 }%
11337 \def\Hy@tempa{#1}%
11338 \ifx\Hy@tempa\@urltype
11339 \special{!%
11340   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11341     \ifHy@href@ismap
11342       /IsMap true%
11343     \fi
11344     \Hy@href@nextactionraw
11345   >;%
11346   a=<%
11347     \ifHy@pdfa /F 4\fi
11348     \Hy@setpdfborder
11349     \ifx\CurrentBorderColor\relax
11350     \else
11351       /C [\CurrentBorderColor]%
11352     \fi
11353   >%
11354 }%
11355 \else
11356 \protected@edef\Hy@testname{#2}%
11357 \ifx\Hy@testname\@empty
11358 \Hy@Warning{%
11359   Empty destination name,\MessageBreak
11360   using '\Hy@undefinedname'%
11361 }%
11362 \let\Hy@testname\Hy@undefinedname
11363 \fi
11364 \special{!%
11365   aref \expandafter\HyperDestNameFilter
11366     \expandafter{\Hy@testname};%
11367   a=<%
11368     \ifHy@pdfa /F 4\fi
11369     \Hy@setpdfborder
11370     \ifx\CurrentBorderColor\relax
11371     \else
11372       /C [\CurrentBorderColor]%
11373     \fi
11374   >%
11375 }%
11376 \fi
11377 }
11378 \def\hyper@linkend{%
11379 \special{!endaref}%
11380 \Hy@endcolorlink
11381 }
11382 \def\hyper@linkfile#1#2#3{%
11383 \leavevmode
11384 \def\Hy@pstringF{#2}%
11385 \Hy@CleanupFile\Hy@pstringF
11386 \special{!%
11387   aref <%
11388     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11389   f=\Hy@pstringF>#3;%
11390   a=<%
11391     \ifHy@pdfa /F 4\fi
11392     \Hy@setpdfborder

```



```

11393 \ifx\@filebordercolor\relax
11394 \else
11395 /C [\@filebordercolor]%
11396 \fi
11397 >%
11398 }%
11399 \Hy@colorlink\@filecolor
11400 #1\Hy@xspace@end
11401 \Hy@endcolorlink
11402 \special{!endaref}%
11403 }
11404 \def\hyper@linkurl#1#2{%
11405 \begingroup
11406 \Hy@pstringdef\Hy@pstringURI{#2}%
11407 \hyper@chars
11408 \leavevmode
11409 \special{!%
11410 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11411 \ifHy@href@ismap
11412 /IsMap true%
11413 \fi
11414 \Hy@href@nextactionraw
11415 >;%
11416 a=<%
11417 \ifHy@pdfa /F 4\fi
11418 \Hy@setpdfborder
11419 \ifx\@urlbordercolor\relax
11420 \else
11421 /C [\@urlbordercolor]%
11422 \fi
11423 >%
11424 }%
11425 \Hy@colorlink\@urlcolor
11426 #1\Hy@xspace@end
11427 \Hy@endcolorlink
11428 \special{!endaref}%
11429 \endgroup
11430 }
11431 \def\hyper@link#1#2#3{%
11432 \Hy@VerboseLinkStart{#1}{#2}%
11433 \ltx@ifundefined{c#1bordercolor}{%
11434 \let\CurrentBorderColor\relax
11435 }{%
11436 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11437 }%
11438 \leavevmode
11439 \protected@edef\Hy@testname{#2}%
11440 \ifx\Hy@testname\@empty
11441 \Hy@Warning{%
11442 Empty destination name,\MessageBreak
11443 using ``\Hy@undefinedname'%
11444 }%
11445 \let\Hy@testname\Hy@undefinedname
11446 \fi
11447 \special{!%
11448 aref \expandafter\HyperDestNameFilter
11449 \expandafter{\Hy@testname};%

```

```

11450   a=<%
11451       \ifHy@pdfa /F 4\fi
11452       \Hy@setpdfborder
11453       \ifx\CurrentBorderColor\relax
11454       \else
11455       /C [\CurrentBorderColor]%
11456       \fi
11457   >%
11458 }%
11459 \expandafter
11460 \Hy@colorlink\csname @#1color\endcsname
11461   #3\Hy@xspace@end
11462 \Hy@endcolorlink
11463 \special{!endaref}%
11464 }
11465 \def\hyper@image#1#2{%
11466 \hyper@linkurl{#2}{#1}%
11467 }
11468 \def\@hyper@launch run:#1\#2#3{%
11469 \Hy@pstringdef\Hy@pstringF{#1}%
11470 \Hy@pstringdef\Hy@pstringP{#3}%
11471 \leavevmode
11472 \special{!aref %
11473   <u=%
11474     /Type/Action%
11475     /S/Launch%
11476     /F(\Hy@pstringF)%
11477     \Hy@SetNewWindow
11478     \ifx\#3\%
11479     \else
11480     /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11481     \fi
11482     \Hy@href@nextactionraw
11483   >,%
11484   a=<%
11485       \ifHy@pdfa /F 4\fi
11486       \Hy@setpdfborder
11487       \ifx\@runbordercolor\relax
11488       \else
11489       /C[\@runbordercolor]%
11490       \fi
11491   >%
11492 }%
11493 \Hy@colorlink\@runcolor
11494   #2\Hy@xspace@end
11495 \Hy@endcolorlink
11496 \special{!endaref}%
11497 }
11498 \def\Acrobatmenu#1#2{%
11499 \EdefEscapeName\Hy@temp@menu{#1}%
11500 \Hy@Acrobatmenu{#1}{#2}{%
11501 \special{!%
11502   aref <u=/S /Named /N /\Hy@temp@menu>;%
11503   a=<%
11504       \ifHy@pdfa /F 4\fi
11505       \Hy@setpdfborder
11506       \ifx\@menubordercolor\relax

```

```

11507     \else
11508       /C[\@menubordercolor]%
11509     \fi
11510   >%
11511 }%
11512 \Hy@colorlink\@menucolor
11513   #2\Hy@xspace@end
11514 \Hy@endcolorlink
11515 \special{!endaref}%
11516 }%
11517 }

```

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

The code below makes sense for V_TE_X 7.02 or later.

Please never use \@ifundefined{V_TE_Xversion}{..}{..} *globally*.

```

11518 \ifnum\Hy@VTeXversion<702 %
11519 \else
11520   \def\hyper@pagetransition{%
11521     \ifx\@pdfpagetransition\relax
11522     \else
11523       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

11524   \else
11525     \hvtex@parse@trans\@pdfpagetransition
11526   \fi
11527 \fi
11528 }%

```

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

Syntax of V_TE_X \special{!trans <transition_effect>}:

```

<transition_effect>_::=_<transition_style>[,<transition_duration>]
<transition_style>_::=_<Blinds_effect>_|_<Box_effect>_|
_<Dissolve_effect>_|_<Glitter_effect>_|
_<Split_effect>_|_<Wipe_effect>
<Blinds_effect>_::=_B[<effect_dimension>]
<Box_effect>_::=_X[<effect_motion>]
<Dissolve_effect>_::=_D
<Glitter_effect>_::=_G[<effect_direction>]
<Split_effect>_::=_S[<effect_motion>][<effect_dimension>]
<Wipe_effect>_::=_W[<effect_direction>]
<Replace_effect>_::=_R
<effect_direction>_::=_<number>
<effect_dimension>_::=_H_|_V
<effect_motion>_::=_I_|_O
<transition_duration>_::=_<number>

```

Transition codes:

```

11529 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11530 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11531 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11532 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11533 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11534 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11535 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```
11536 \def\hvtex@par@dimension{/Dm}%
11537 \def\hvtex@par@direction{/Di}%
11538 \def\hvtex@par@duration{/D}%
11539 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11540 \def\hvtex@gettoken{%
11541   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11542 }%
```

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

```
11543 \def\hvtex@gettoken@#1 #2\@nil{%
11544   \edef\hvtex@token{#1}%
11545   \edef\hvtex@buffer{#2}%
11546 }%
11547 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11548 \let\hvtex@trans@code\@empty
11549 \let\hvtex@param@dimension\@empty
11550 \let\hvtex@param@direction\@empty
11551 \let\hvtex@param@duration\@empty
11552 \let\hvtex@param@motion\@empty
11553 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11554 \hvtex@gettoken
11555 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11556 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11557 \else
11558   \hvtex@gettoken
11559 \fi
11560 \fi
11561 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11562 \hvtex@trans@params
11563 }%
```

Reentrant macro to parse optional parameters.

```
11564 \def\hvtex@trans@params{%
11565   \ifx\hvtex@buffer\@empty
11566   \else
11567     \hvtex@gettoken
11568     \let\hvtex@trans@par\hvtex@token
11569     \ifx\hvtex@buffer\@empty
11570     \else
11571       \hvtex@gettoken
11572       \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
11573       \let\hvtex@param@duration\hvtex@token
11574     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11575      \expandafter\edef\expandafter\hvtex@param@motion
11576      \expandafter{\expandafter\@gobble\hvtex@token}%
11577      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11578      \expandafter\edef\expandafter\hvtex@param@dimension
11579      \expandafter{\expandafter\@gobble\hvtex@token}%
11580      \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).

```
11581      \let\hvtex@param@direction\hvtex@token
11582      \fi\fi\fi\fi
11583      \fi
11584      \fi
11585      \ifx\hvtex@buffer\@empty
11586      \let\next\hvtex@produce@trans
11587      \else
11588      \let\next\hvtex@trans@params
11589      \fi
11590      \next
11591  }%
```

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

```
11592 \def\hvtex@produce@trans{%
11593   \let\vtex@trans@special\@empty
11594   \if S\hvtex@trans@code
11595     \edef\vtex@trans@special{\hvtex@trans@code
11596       \hvtex@param@dimension\hvtex@param@motion}%
11597   \else\if B\hvtex@trans@code
11598     \edef\vtex@trans@special{%
11599       \hvtex@trans@code\hvtex@param@dimension
11600     }%
11601   \else\if X\hvtex@trans@code
11602     \edef\vtex@trans@special{%
11603       \hvtex@trans@code\hvtex@param@motion
11604     }%
11605   \else\if W\hvtex@trans@code
11606     \edef\vtex@trans@special{%
11607       \hvtex@trans@code\hvtex@param@direction
11608     }%
11609   \else\if D\hvtex@trans@code
11610     \let\vtex@trans@special\hvtex@trans@code
11611   \else\if R\hvtex@trans@code
11612     \let\vtex@trans@special\hvtex@trans@code
11613   \else\if G\hvtex@trans@code
11614     \edef\vtex@trans@special{%
11615       \hvtex@trans@code\hvtex@param@direction
11616     }%
11617   \fi\fi\fi\fi\fi\fi
11618   \ifx\vtex@trans@special\@empty
11619   \else
11620     \ifx\hvtex@param@duration\@empty
11621     \else
11622       \setlength{\dimen@}{\hvtex@param@duration\p@}%
```

I'm not guilty of possible overflow.

```

11623     \multiply\dimen@ \@m
11624     \edef\vtex@trans@special{%
11625         \vtex@trans@special,\strip@pt\dimen@
11626     }%
11627     \fi

```

And all the mess is just for this.

```

11628     \special{!trans \vtex@trans@special}%
11629     \fi
11630 }%

11631 \def\hyper@pageduration{%
11632     \ifx\@pdfpageduration\relax
11633     \else
11634         \ifx\@pdfpageduration\@empty
11635             \special{!duration-}%
11636         \else
11637             \special{!duration \@pdfpageduration}%
11638         \fi
11639     \fi
11640 }%

11641 \def\hyper@pagehidden{%
11642     \ifHy@useHidKey
11643         \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11644     \fi
11645 }%

11646 \g@addto@macro\Hy@EveryPageBoxHook{%
11647     \hyper@pagetransition
11648     \hyper@pageduration
11649     \hyper@pagehidden
11650 }%
11651 \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

```

11652 \ifx\@pdfproducer\relax
11653     \def\@pdfproducer{VTeX}%
11654     \ifnum\Hy@VTeXversion>\z@
11655         \count@\VTeXversion
11656         \divide\count@ 100 %
11657         \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11658         \multiply\count@ -100 %
11659         \advance\count@\VTeXversion
11660     \edef\@pdfproducer{%
11661         \@pdfproducer
11662         .\ifnum\count@<10 0\fi\the\count@
11663         \ifx\VTeXOS\@undefined\else
11664             \ifnum\VTeXOS>0 %
11665                 \ifnum\VTeXOS<6 %
11666                     \space%

```

```

11667         \ifcase\VTeXOS
11668         \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11669         \fi
11670     )%
11671 \fi
11672 \fi
11673 \fi
11674 ,\space
11675 \ifnum\OpMode=\@one PDF\else PS\fi
11676 \space backend%
11677 \ifx\gexmode\@undefined\else
11678 \ifnum\gexmode>\z@\space with GeX\fi
11679 \fi
11680 }%
11681 \fi
11682 \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).

```

11683 \def\PDF@SetupDoc{%
11684 \ifx\@pdfpagescrop\@empty
11685 \else
11686 \special{!pdfinfo b=<\@pdfpagescrop>}%
11687 \fi
11688 \ifx\@pdfstartpage\@empty
11689 \else
11690 \ifx\@pdfstartview\@empty
11691 \else
11692 \special{!onopen Page\@pdfstartpage}%
11693 \fi
11694 \fi
11695 \special{!pdfinfo p=</\@pdfpagemode>}%
11696 \ifx\@baseurl\@empty
11697 \else
11698 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11699 \fi
11700 \special{!pdfinfo v=<<<%
11701 \ifHy@pdftoolbar\else /HideToolbar true\fi
11702 \ifHy@pdfmenubar\else /HideMenubar true\fi
11703 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11704 \ifHy@pdffitwindow /FitWindow true\fi
11705 \ifHy@pdfcenterwindow /CenterWindow true\fi
11706 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11707 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11708 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

11709 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11710 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11711 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11712 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11713 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11714 \Hy@UseNameKey{Duplex}\@pdfduplex
11715 \ifx\@pdfpicktraybypdfsize\@empty
11716 \else
11717 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11718 \fi
11719 \ifx\@pdfprintpagerange\@empty
11720 \else
11721 /PrintPageRange[\@pdfprintpagerange]%
11722 \fi
11723 \ifx\@pdfnumcopies\@empty
11724 \else
11725 /NumCopies \@pdfnumcopies
11726 \fi
11727 >>>}%
11728 \ifx\@pdfpagelayout\@empty
11729 \else
11730 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11731 \fi
11732 }%
11733 \HyInfo@AddonUnsupportedtrue
11734 \define@key{Hyp}{pdfcreationdate}{%
11735 \Hy@Warning{%
11736 VTeX does not support pdfcreationdate.\MessageBreak
11737 Therefore its setting is ignored%
11738 }%
11739 }
11740 \define@key{Hyp}{pdfmoddate}{%
11741 \Hy@Warning{%
11742 VTeX does not support pdfmoddate.\MessageBreak
11743 Therefore its setting is ignored%
11744 }%
11745 }
11746 \def\PDF@FinishDoc{%
11747 \Hy@UseMaketitleInfos
11748 \HyInfo@TrappedUnsupported
11749 \special{!pdfinfo a=<\@pdfauthor>}%
11750 \special{!pdfinfo t=<\@pdftitle>}%
11751 \special{!pdfinfo s=<\@pdfsubject>}%
11752 \special{!pdfinfo c=<\@pdfcreator>}%
11753 \ifx\@pdfproducer\relax
11754 \else
11755 \special{!pdfinfo r=<\@pdfproducer>}%
11756 \fi
11757 \special{!pdfinfo k=<\@pdfkeywords>}%
11758 \Hy@DisableOption{pdfauthor}%
11759 \Hy@DisableOption{pdftitle}%
11760 \Hy@DisableOption{pdfsubject}%
11761 \Hy@DisableOption{pdfcreator}%
11762 \Hy@DisableOption{addtopdfcreator}%
11763 \Hy@DisableOption{pdfcreationdate}%
11764 \Hy@DisableOption{pdfcreationdate}%
11765 \Hy@DisableOption{pdfmoddate}%

```



```

11766 \Hy@DisableOption{pdfproducer}%
11767 \Hy@DisableOption{pdfkeywords}%
11768 \Hy@DisableOption{pdftrapped}%
11769 \Hy@DisableOption{pdfinfo}%
11770 }
11771 </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.

```

11772 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11773 <package>\providecommand*{\Hy@DistillerDestFix}{}
11774 <*pdfmark | dviwindo>
11775 \def\Hy@DistillerDestFix{%
11776   \begingroup
11777     \let\x\literalps@out

```

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

```

11778   \ifnum \@ifundefined{OpMode}{0}{}%
11779     \@ifundefined{gexmode}{0}{}%
11780     \ifnum\gexmode>0 \OpMode\else 0\fi
11781   }>1 %
11782   \def\x##1{%
11783     \immediate\special{!=##1}%
11784   }%
11785   \fi
11786   \x{%
11787     /product where{%
11788       pop %
11789       product(Distiller)search{%
11790         pop pop pop %
11791         version(.)search{%
11792           exch pop exch pop%
11793           (3011)eq{%
11794             gsave %
11795             newpath 0 0 moveto closepath clip%
11796             /Courier findfont 10 scalefont setfont %
11797             72 72 moveto(.).show %
11798             grestore%
11799           }if%
11800           }{pop}ifelse%
11801           }{pop}ifelse%
11802         }if%
11803       }%
11804     \endgroup
11805   }
11806 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```
11807 (*pdfmark)
11808 \Hy@breaklinks@unsupported
11809 \def\HyPat@ObjRef{%
11810   \[~{}]+\}%
11811 }
11812 \Hy@WrapperDef\hyper@anchor#1{%
11813   \Hy@SaveLastskip
11814   \Hy@VerboseAnchor{#1}%
11815   \begingroup
11816     \pdfmark[\anchor@spot]{%
11817       pdfmark=/DEST,%
11818       linktype=anchor,%
11819       View=/\@pdfview \@pdfviewparams,%
11820       DestAnchor={#1}%
11821     }%
11822   \endgroup
11823   \Hy@RestoreLastskip
11824 }
11825 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11826 \Hy@WrapperDef\hyper@anchorstart#1{%
11827   \Hy@SaveLastskip
11828   \Hy@VerboseAnchor{#1}%
11829   \literalps@out{H.S}%
11830   \Hy@AllowHyphens
11831   \xdef\hyper@currentanchor{#1}%
11832   \Hy@activeanchortrue
11833 }
11834 \def\hyper@anchorend{%
11835   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11836   \pdfmark{%
11837     pdfmark=/DEST,%
11838     linktype=anchor,%
11839     View=/\@pdfview \@pdfviewparams,%
11840     DestAnchor=\hyper@currentanchor,%
11841   }%
11842   \Hy@activeanchorfalse
11843   \Hy@RestoreLastskip
11844 }
11845 \def\hyper@linkstart#1#2{%
11846   \Hy@VerboseLinkStart{#1}{#2}%
11847   \ifHy@breaklinks
11848     \else
11849     \leavevmode
```

```

11850 \ifmmode
11851   \def\Hy@LinkMath{$}%
11852 \else
11853   \let\Hy@LinkMath\ltx@empty
11854 \fi
11855 \Hy@SaveSpaceFactor
11856 \hbox\bgroup
11857 \Hy@RestoreSpaceFactor
11858 \Hy@LinkMath
11859 \fi
11860 \expandafter\Hy@colorlink\csname @#1color\endcsname
11861 \literalps@out{H.S}%
11862 \Hy@AllowHyphens
11863 \xdef\hyper@currentanchor{#2}%
11864 \gdef\hyper@currentlinktype{#1}%
11865 }
11866 \def\hyper@linkend{%
11867   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11868   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11869     \let\Hy@tempcolor\relax
11870   }{%
11871     \edef\Hy@tempcolor{%
11872       \csname @\hyper@currentlinktype bordercolor\endcsname
11873     }%
11874   }%
11875   \pdfmark{%
11876     pdfmark=/ANN,%
11877     linktype=link,%
11878     Subtype=/Link,%
11879     PDFAMFlags=4,%
11880     Dest=\hyper@currentanchor,%
11881     AcroHighlight=\@pdfhighlight,%
11882     Border=\@pdfborder,%
11883     BorderStyle=\@pdfborderstyle,%
11884     Color=\Hy@tempcolor,%
11885     Raw=H.B%
11886   }%
11887   \Hy@endcolorlink
11888   \ifHy@breaklinks
11889   \else
11890     \Hy@LinkMath
11891     \Hy@SaveSpaceFactor
11892     \egroup
11893     \Hy@RestoreSpaceFactor
11894   \fi
11895 }

```

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.

```

11896 \begingroup
11897   \catcode`P=12 %
11898   \catcode`T=12 %
11899   \lowercase{\endgroup
11900   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11901 }
11902 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
11903 \def\hyper@pagetransition{%
11904   \ifx\@pdfpagetransition\relax
11905   \else
11906     \ifx\@pdfpagetransition\@empty
11907       % 1. Does an old entry have to be deleted?
11908       % 2. If 1=yes, how to delete?
11909     \else
11910       \pdfmark{%
11911         pdfmark=/PUT,%
11912         Raw={%
11913           \string{ThisPage\string}%
11914           <</Trans << /S /\@pdfpagetransition\space >> >>%
11915         }%
11916       }%
11917     \fi
11918   \fi
11919 }
```

\hyper@pageduration

```
11920 \def\hyper@pageduration{%
11921   \ifx\@pdfpageduration\relax
11922   \else
11923     \ifx\@pdfpageduration\@empty
11924       % 1. Does an old entry have to be deleted?
11925       % 2. If 1=yes, how to delete?
11926     \else
11927       \pdfmark{%
11928         pdfmark=/PUT,%
11929         Raw={%
11930           \string{ThisPage\string}%
11931           <</Dur \@pdfpageduration>>%
11932         }%
11933       }%
11934     \fi
11935   \fi
11936 }
```

\hyper@pagehidden

```
11937 \def\hyper@pagehidden{%
11938   \ifHy@useHidKey
11939     \pdfmark{%
11940       pdfmark=/PUT,%
11941       Raw={%
11942         \string{ThisPage\string}%
11943         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11944       }%
11945     }%
11946   \fi
11947 }

11948 \g@addto@macro\Hy@EveryPageBoxHook{%
11949   \hyper@pagetransition
11950   \hyper@pageduration
11951   \hyper@pagehidden
11952 }

11953 \def\hyper@image#1#2{%
```

```

11954 \hyper@linkurl{#2}{#1}%
11955 }
11956 \def\Hy@undefinedname{UNDEFINED}
11957 \def\hyper@link#1#2#3{%
11958 \Hy@VerboseLinkStart{#1}{#2}%
11959 \ltx@ifundefined{#1bordercolor}{%
11960 \let\Hy@tempcolor\relax
11961 }{%
11962 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11963 }%
11964 \begingroup
11965 \protected@edef\Hy@testname{#2}%
11966 \ifx\Hy@testname\@empty
11967 \Hy@Warning{%
11968 Empty destination name,\MessageBreak
11969 using '\Hy@undefinedname'%
11970 }%
11971 \let\Hy@testname\Hy@undefinedname
11972 \fi
11973 \pdfmark[{#3}]{%
11974 Color=\Hy@tempcolor,%
11975 linktype={#1},%
11976 AcroHighlight=\@pdfhighlight,%
11977 Border=\@pdfborder,%
11978 BorderStyle=\@pdfborderstyle,%
11979 pdfmark=/ANN,%
11980 Subtype=/Link,%
11981 PDFAFlags=4,%
11982 Dest=\Hy@testname
11983 }%
11984 \endgroup
11985 }
11986 \newtoks\pdf@docset
11987 \def\PDF@FinishDoc{%
11988 \Hy@UseMaketitleInfos
11989 \Hy@Info@GenerateAddons
11990 \let\Hy@temp\@empty
11991 \ifx\@pdfcreationdate\@empty
11992 \else
11993 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11994 \fi
11995 \ifx\@pdfmoddate\@empty
11996 \else
11997 \expandafter\def\expandafter\Hy@temp\expandafter{%
11998 \Hy@temp
11999 ModDate=\@pdfmoddate,%
12000 }%
12001 \fi
12002 \ifx\@pdfproducer\relax
12003 \else
12004 \expandafter\def\expandafter\Hy@temp\expandafter{%
12005 \Hy@temp
12006 Producer=\@pdfproducer,%
12007 }%
12008 \fi
12009 \expandafter
12010 \pdfmark\expandafter{%

```

```

12011 \Hy@temp
12012 pdfmark=/DOCINFO,%
12013 Title=\@pdftitle,%
12014 Subject=\@pdfsubject,%
12015 Creator=\@pdfcreator,%
12016 Author=\@pdfauthor,%
12017 Keywords=\@pdfkeywords,%
12018 Trapped=\@pdftrapped
12019 }%
12020 \ifx\HyInfo@Addons\@empty
12021 \else
12022 \pdfmark{%
12023 pdfmark=/DOCINFO,%
12024 Raw={\HyInfo@Addons}%
12025 }%
12026 \fi
12027 \Hy@DisableOption{pdfauthor}%
12028 \Hy@DisableOption{pdftitle}%
12029 \Hy@DisableOption{pdfsubject}%
12030 \Hy@DisableOption{pdfcreator}%
12031 \Hy@DisableOption{addtopdfcreator}%
12032 \Hy@DisableOption{pdfcreationdate}%
12033 \Hy@DisableOption{pdfcreationdate}%
12034 \Hy@DisableOption{pdfmoddate}%
12035 \Hy@DisableOption{pdfproducer}%
12036 \Hy@DisableOption{pdfkeywords}%
12037 \Hy@DisableOption{pdftrapped}%
12038 \Hy@DisableOption{pdfinfo}%
12039 }
12040 \def\PDF@SetupDoc{%
12041 \def\Hy@temp{}%
12042 \ifx\@pdfstartpage\@empty
12043 \else
12044 \ifx\@pdfstartview\@empty
12045 \else
12046 \edef\Hy@temp{%
12047 ,Page=\@pdfstartpage
12048 ,View=\@pdfstartview
12049 }%
12050 \fi
12051 \fi
12052 \edef\Hy@temp{%
12053 \noexpand\pdfmark{%
12054 pdfmark=/DOCVIEW,%
12055 PageMode=/\@pdfpagemode
12056 \Hy@temp
12057 }%
12058 }%
12059 \Hy@temp
12060 \ifx\@pdfpagescrop\@empty
12061 \else
12062 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12063 \fi
12064 \edef\Hy@temp{%
12065 \ifHy@pdftoolbar\else /HideToolbar true\fi
12066 \ifHy@pdfmenubar\else /HideMenubar true\fi
12067 \ifHy@pdfwindowui\else /HideWindowUI true\fi

```

```

12068 \ifHy@pdffitwindow /FitWindow true\fi
12069 \ifHy@pdfcenterwindow /CenterWindow true\fi
12070 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12071 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12072 \Hy@UseNameKey{Direction}\@pdfdirection
12073 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12074 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12075 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12076 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12077 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12078 \Hy@UseNameKey{Duplex}\@pdfduplex
12079 \ifx\@pdfpicktraybypdfsize\@empty
12080 \else
12081 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12082 \fi
12083 \ifx\@pdfprintpagerange\@empty
12084 \else
12085 /PrintPageRange[\@pdfprintpagerange]%
12086 \fi
12087 \ifx\@pdfnumcopies\@empty
12088 \else
12089 /NumCopies \@pdfnumcopies
12090 \fi
12091 }%
12092 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12093 \pdfmark{%
12094 pdfmark=/PUT,%
12095 Raw={%
12096 \string{Catalog\string}<<%
12097 \ifx\Hy@temp\@empty
12098 \else
12099 /ViewerPreferences<<\Hy@temp>>%
12100 \fi
12101 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12102 \ifx\@pdflang\relax
12103 \else
12104 /Lang(\@pdflang)%
12105 \fi
12106 \ifx\@baseurl\@empty
12107 \else
12108 /URI<</Base(\Hy@pstringB)>>%
12109 \fi
12110 >>%
12111 }%
12112 }%
12113 }
12114 \pdfmark
12115 \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.

```

12116 \newif\ifHy@pdfmarkerror
12117 \def\pdfmark{\ifnextchar{\pdfmark@}{\pdfmark@[]}}

```

```

12118 \def\pdfmark@[#1]#2{%
12119   \Hy@pdfmarkerrorfalse
12120   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12121   \@processme
12122   \let\pdf@type\relax
12123   \let\pdf@objdef\ltx@empty
12124   \kvsetkeys{PDF}{#2}%
12125   \ifHy@pdfmarkerror
12126   \else
12127     \ifx\pdf@type\relax
12128       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12129       \ifx\#1\%
12130       \else
12131         \pdf@rect{#1}%
12132       \fi
12133     \else
12134       \ifx\#1\%
12135         \literalps@out{%
12136           [%
12137             \ifx\pdf@objdef\ltx@empty
12138             \else
12139               /_objdef\string{\pdf@objdef\string}%
12140             \fi
12141             \the\pdf@toks\space\pdf@type\space pdfmark%
12142           ]%
12143         \else
12144           \ltx@ifundefined{@\pdf@linktype color}{%
12145             \Hy@colorlink\@linkcolor
12146           }{%
12147             \expandafter\Hy@colorlink
12148               \csname @\pdf@linktype color\endcsname
12149           }%
12150           \pdf@rect{#1}%
12151           \literalps@out{%
12152             [%
12153               \ifx\pdf@objdef\ltx@empty
12154               \else
12155                 /_objdef\string{\pdf@objdef\string}%
12156               \fi
12157               \the\pdf@toks\space\pdf@type\space pdfmark%
12158             ]%
12159             \Hy@endcolorlink
12160           \fi
12161         \fi
12162       \fi
12163 }

```

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}

12164 \newsavebox{\pdf@box}
12165 \providecommand*\Hy@setouterhbox{\sbox}
12166 \providecommand*\Hy@breaklinksunhbox{\unhbox}
12167 \def\Hy@DEST{/DEST}
12168 \def\pdf@rect#1{%
12169   \begingroup
12170   \chardef\x=1 %
12171   \def\Hy@temp{#1}%
12172   \ifx\Hy@temp\ltx@empty
12173     \chardef\x=0 %
12174   \else
12175     \def\y{\anchor@spot}%
12176     \ifx\Hy@temp\y
12177       \def\y{\relax}%
12178     \ifx\anchor@spot\y
12179       \chardef\x=0 %
12180     \fi
12181   \fi
12182 \fi
12183 \expandafter\endgroup
12184 \ifcase\x
12185   \literalps@out{H.S}%
12186   \literalps@out{H.R}%
12187 \else
12188   \leavevmode
12189   \Hy@SaveSpaceFactor
12190   \ifmmode
12191     \def\Hy@LinkMath{$}%
12192   \else
12193     \let\Hy@LinkMath\ltx@empty
12194   \fi
12195   \ifHy@breaklinks
12196     \Hy@setouterhbox\pdf@box{%
12197       \Hy@RestoreSpaceFactor
12198       \Hy@LinkMath
12199       \Hy@AllowHyphens#1\Hy@xspace@end
12200       \Hy@LinkMath
12201       \Hy@SaveSpaceFactor
12202     }%
12203   \else
12204     \sbox\pdf@box{%
12205       \Hy@RestoreSpaceFactor
12206       \Hy@LinkMath
12207       #1\Hy@xspace@end
12208       \Hy@LinkMath
12209       \Hy@SaveSpaceFactor
12210     }%
12211   \fi
12212   \dimen@ht\pdf@box
12213   \ifdim\dp\pdf@box=\z@
12214     \literalps@out{H.S}%
12215   \else
12216     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12217   \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...).

```

12218 \ifHy@breaklinks
12219 \ifhmode
12220 \Hy@breaklinksunhbox\pdf@box
12221 \else
12222 \box\pdf@box
12223 \fi
12224 \else
12225 \expandafter\box\pdf@box
12226 \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

12227 \ifdim\dimen@=\z@
12228 \literalps@out{H.R}%
12229 \else
12230 \raise\dimen@\hbox{\literalps@out{H.R}}%
12231 \fi
12232 \Hy@RestoreSpaceFactor
12233 \fi
12234 \ifx\pdf@type\Hy@DEST
12235 \else
12236 \pdf@addtoksx{H.B}%
12237 \fi
12238 }

```

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.

```

12239 \newtoks\pdf@toks
12240 \newtoks\pdf@defaulttoks
12241 \pdf@defaulttoks={} %
12242 \def\pdf@addtoks#1#2{%
12243 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12244 \@processme
12245 }
12246 \def\pdf@addtoksx#1{%
12247 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12248 \@processme
12249 }
12250 \def\PDFdefaults#1{%
12251 \pdf@defaulttoks={#1}%
12252 }

```

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

```

12253 % what is the type of pdfmark?
12254 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12255 % what is the link type?
12256 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12257 \def\pdf@linktype{link}
12258 % named object?
12259 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12260 \let\pdf@objdef\ltx@empty
12261 % parameter is a stream of PDF
12262 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}

```

```

12263 % parameter is a name
12264 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12265 % parameter is a array
12266 \define@key{PDF}{Border}{%
12267   \edef\Hy@temp{#1}%
12268   \ifx\Hy@temp\@empty
12269     \else
12270       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12271     \fi
12272 }
12273 \let\Hy@BorderArrayPatch\@empty
12274 % parameter is a dictionary
12275 \define@key{PDF}{BorderStyle}{%
12276   \edef\Hy@temp{#1}%
12277   \ifx\Hy@temp\@empty
12278     \else
12279       \pdf@addtoks{<<#1>>}{BS}%
12280     \fi
12281 }
12282 % parameter is a array
12283 \define@key{PDF}{Color}{%
12284   \ifx\relax#1\relax
12285     \else
12286       \pdf@addtoks{[#1]}{Color}% hash-ok
12287     \fi
12288 }
12289 % parameter is a string
12290 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12291 % parameter is a integer
12292 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12293 % parameter is a array
12294 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12295 % parameter is a string
12296 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12297 % parameter is a string or file
12298 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12299 % parameter is a destination
12300 \define@key{PDF}{Dest}{%
12301   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12302   \ifx\Hy@pstringDest\@empty
12303     \Hy@pdfmarkerrortrue
12304     \Hy@Warning{Destination with empty name ignored}%
12305   \else
12306     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12307   \fi
12308 }
12309 \define@key{PDF}{DestAnchor}{%
12310   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12311   \ifx\Hy@pstringDest\@empty
12312     \Hy@pdfmarkerrortrue
12313     \Hy@Warning{Destination with empty name ignored}%
12314   \else
12315     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12316   \fi
12317 }
12318 % parameter is a string
12319 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}

```

```

12320 % parameter is a string
12321 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12322 % parameter is a int
12323 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12324 \define@key{PDF}{PDFAFlags}{%
12325   \ifHy@pdfa
12326     \pdf@addtoks{#1}{F}%
12327   \fi
12328 }
12329 % parameter is a name
12330 \define@key{PDF}{AcroHighlight}{%
12331   \begingroup
12332     \edef\x{#1}%
12333     \expandafter\endgroup\ifx\x@empty
12334       \else
12335         \pdf@addtoks{#1}{H}%
12336       \fi
12337 }
12338 % parameter is a string
12339 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12340 % parameter is a string
12341 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12342 % parameter is a string
12343 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12344 % parameter is a string
12345 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12346 % parameter is a Boolean
12347 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12348 % parameter is a integer or name
12349 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12350 % parameter is a name
12351 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12352 % parameter is a string
12353 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12354 % parameter is a array
12355 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12356 % parameter is a integer
12357 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12358 % parameter is a name
12359 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12360 % parameter is a string
12361 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12362 % parameter is a string
12363 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12364 % parameter is a string
12365 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
12366 % parameter is an array
12367 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12368 % parameter is a string
12369 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12370 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12371 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12372 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12373 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12374 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12375 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}

```

```

12376 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12377 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12378 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12379 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
12380 \define@key{PDF}{Trapped}{%
12381   \edef\Hy@temp{#1}%
12382   \ifx\Hy@temp\@empty
12383     \else
12384       \pdf@addtoks{/#1}{Trapped}%
12385     \fi
12386 }
12387
12388 (/pdfmarkbase)
12389 (*pdfmark)
12390 \def\Acrobatmenu#1#2{%
12391   \EdefEscapeName\Hy@temp@menu{#1}%
12392   \Hy@Acrobatmenu{#1}{#2}{%
12393     \pdfmark[{#2}]{%
12394       linktype=menu,%
12395       pdfmark=/ANN,%
12396       AcroHighlight=\@pdfhighlight,%
12397       Border=\@pdfborder,%
12398       BorderStyle=\@pdfborderstyle,%
12399       Color=\@menubordercolor,%
12400       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12401       Subtype=/Link,%
12402       PDFAFlags=4%
12403     }%
12404   }%
12405 }

```

And now for some useful examples:

```

12406 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12407 \def\PDFNextPage@[#1]#2{%
12408   \pdfmark[{#2}]{%
12409     #1,%
12410     Border=\@pdfborder,%
12411     BorderStyle=\@pdfborderstyle,%
12412     Color=.2 .1 .5,%
12413     pdfmark=/ANN,%
12414     Subtype=/Link,%
12415     PDFAFlags=4,%
12416     Page=/Next%
12417   }%
12418 }
12419 \def\PDFPreviousPage{%
12420   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12421 }
12422 \def\PDFPreviousPage@[#1]#2{%
12423   \pdfmark[{#2}]{%
12424     #1,%
12425     Border=\@pdfborder,%
12426     BorderStyle=\@pdfborderstyle,%
12427     Color=.4 .4 .1,%
12428     pdfmark=/ANN,%
12429     Subtype=/Link,%
12430     PDFAFlags=4,%
12431     Page=/Prev%

```

```

12432 }%
12433 }
12434 \def\PDFOpen#1{%
12435   \pdfmark{#1,pdfmark=/DOCVIEW}%
12436 }

```

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

```

12437 \def\hyper@linkurl#1#2{%
12438   \begingroup
12439     \Hy@pstringdef\Hy@pstringURI{#2}%
12440     \hyper@chars
12441     \leavevmode
12442     \pdfmark[{#1}]{%
12443       pdfmark=/ANN,%
12444       linktype=url,%
12445       AcroHighlight=\@pdfhighlight,%
12446       Border=\@pdfborder,%
12447       BorderStyle=\@pdfborderstyle,%
12448       Color=\@urlbordercolor,%
12449       Action={<<%
12450         /Subtype/URI%
12451         /URI(\Hy@pstringURI)%
12452         \ifHy@href@ismap
12453           /IsMap true%
12454         \fi
12455       >>},%
12456       Subtype=/Link,%
12457       PDFAFflags=4%
12458     }%
12459   \endgroup
12460 }
12461 \def\hyper@linkfile#1#2#3{%
12462   \begingroup
12463     \def\Hy@pstringF{#2}%
12464     \Hy@CleanupFile\Hy@pstringF
12465     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12466     \Hy@pstringdef\Hy@pstringD{#3}%
12467     \Hy@MakeRemoteAction
12468     \leavevmode
12469     \pdfmark[{#1}]{%
12470       pdfmark=/ANN,%
12471       Subtype=/Link,%
12472       PDFAFflags=4,%
12473       AcroHighlight=\@pdfhighlight,%
12474       Border=\@pdfborder,%
12475       BorderStyle=\@pdfborderstyle,%
12476       linktype=file,%
12477       Color=\@filebordercolor,%
12478       Action={%
12479         <<%
12480         /S/GoToR%
12481         \Hy@SetNewWindow
12482         /F(\Hy@pstringF)%
12483         /D%
12484         \ifx\#3\%
12485           [\Hy@href@page\@pdfremotestartview]%
12486         \else
12487           (\Hy@pstringD)cvn%

```

```

12488      \fi
12489      \Hy@href@nextactionraw
12490      >>%
12491    }%
12492  }%
12493 \endgroup
12494 }
12495 \def\@hyper@launch run:#1\|#2#3{%
12496   \begingroup
12497   \Hy@pstringdef\Hy@pstringF{#1}%
12498   \Hy@pstringdef\Hy@pstringP{#3}%
12499   \leavevmode
12500   \pdfmark[{#2}]{%
12501     pdfmark=/ANN,%
12502     Subtype=/Link,%
12503     PDFAFlags=4,%
12504     AcroHighlight=\@pdfhighlight,%
12505     Border=\@pdfborder,%
12506     BorderStyle=\@pdfborderstyle,%
12507     linktype=run,%
12508     Color=\@runbordercolor,%
12509     Action={%
12510       <<%
12511         /S/Launch%
12512         \Hy@SetNewWindow
12513         /F(\Hy@pstringF)%
12514         \ifx\|#3\|%
12515         \else
12516           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12517         \fi
12518         \Hy@href@nextactionraw
12519       >>%
12520     }%
12521   }%
12522 \endgroup
12523 }
12524 \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.

```

12525 \<dvips>
12526 \providecommand*\XR@ext}{pdf}
12527 \let\Hy@raisedlink\ltx@empty
12528 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12529 \def\headerps@out#1{\special{! #1}}%
12530 \input{pdfmark.def}%
12531 \ifx\@pdfproducer\relax
12532   \def\@pdfproducer{dvips + Distiller}%
12533 \fi
12534 \providecommand*\@pdfborder{0 0 1}

```

```

12535 \providecommand*\@pdfborderstyle{}
12536 \providecommand*\@pdfview{XYZ}
12537 \providecommand*\@pdfviewparams{ H.V}
12538 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12539 \g@addto@macro\Hy@FirstPageHook{%
12540   \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.

```

12541   /DvipsToPDF{72.27 mul Resolution div} def%
12542   /PDFToDvips{72.27 div Resolution mul} def%
12543   /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.

```

12544   /BorderArrayPatch{%
12545     [exch{%
12546       dup dup type/integertype eq exch type/realtype eq or%
12547       {BPToDvips}if%
12548     }forall]%
12549   }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.

```

12550   /HyperBorder {1 PDFToDvips} def%
12551   /H.V {pdf@hoff pdf@voff null} def%
12552   /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

```

12553   /H.S {%
12554     currentpoint %
12555     HyperBorder add /pdf@lly exch def %
12556     dup DvipsToPDF 72 add /pdf@hoff exch def %
12557     HyperBorder sub /pdf@llx exch def%
12558   } def%

```

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

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

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

```

12559   /H.L {%
12560     2 sub dup%

```



```

12561 /HyperBasePt exch def %
12562 PDFToDvips /HyperBaseDvips exch def %
12563 currentpoint %
12564 HyperBaseDvips sub /pdf@ury exch def%
12565 /pdf@urx exch def%
12566 } def%
12567 /H.A {%
12568 H.L %
12569 % |pdf@voff| = the distance from the top of the page to a point
12570 % |baselineskip| above the current point in PDF coordinates
12571 currentpoint exch pop %
12572 vsize 72 sub exch DvipsToPDF %
12573 HyperBasePt sub % baseline skip
12574 sub /pdf@voff exch def%
12575 } def%
12576 /H.R {%
12577 currentpoint %
12578 HyperBorder sub /pdf@ury exch def %
12579 HyperBorder add /pdf@urx exch def %
12580 % |pdf@voff| = the distance from the top of the page to the current point, in
12581 % PDF coordinates
12582 currentpoint exch pop vsize 72 sub %
12583 exch DvipsToPDF sub /pdf@voff exch def%
12584 } def%
12585 }%
12586 }
12587 \AtBeginShipoutFirst{%
12588 \ifHy@setpagesize
12589 \begingroup
12590 \@ifundefined{stockwidth}{%
12591 \ifdim\paperwidth>\z@
12592 \ifdim\paperheight>\z@
12593 \special{papersize=\the\paperwidth,\the\paperheight}%
12594 \fi
12595 \fi
12596 }{%
12597 \ifdim\stockwidth>\z@
12598 \ifdim\stockheight>\z@
12599 \special{papersize=\the\stockwidth,\the\stockheight}%
12600 \fi
12601 \fi
12602 }%
12603 \endgroup
12604 \fi
12605 \Hy@DisableOption{setpagesize}%
12606 }
12607 \def\setpdfinkmargin#1{%
12608 \begingroup
12609 \setlength{\dimen@}{#1}%
12610 \literalps@out{%
12611 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12612 }%
12613 \endgroup
12614 }
12615 </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.

```

12616 (*vtexpdfmark)
12617 \providecommand*\XR@ext}{pdf}
12618 \let\Hy@raisedlink\ltx@empty
12619 \def\litalps@out#1{\special{pS:#1}}%
12620 \def\headerps@out#1{\immediate\special{pS:#1}}%
12621 \input{pdfmark.def}%
12622 \ifx\@pdfproducer\relax
12623   \ifnum\OpMode=\@ne
12624     \def\@pdfproducer{VTeX}%
12625   \else
12626     \def\@pdfproducer{VTeX + Distiller}%
12627   \fi
12628 \fi
12629 \providecommand*\@pdfborder{0 0 1}
12630 \providecommand*\@pdfborderstyle{}
12631 \providecommand*\@pdfview{XYZ}
12632 \providecommand*\@pdfviewparams{ H.V}

12633 \g@addto@macro\Hy@FirstPageHook{%
12634   \headerps@out{%
12635     /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.

```

12636   /HyperBorder {1} def%
12637   /H.V {pdf@hoff pdf@voff null} def%
12638   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

12639   /H.S {%
12640     currentpoint %
12641     HyperBorder sub%
12642     /pdf@lly exch def %
12643     dup 72 add /pdf@hoff exch def %
12644     HyperBorder sub%
12645     /pdf@llx exch def%
12646   } def%

```

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

```

12647   /H.L {%
12648     2 sub%
12649     /HyperBasePt exch def %
12650     currentpoint %
12651     HyperBasePt add HyperBorder add%
12652     /pdf@ury exch def %
12653     HyperBorder add%
12654     /pdf@urx exch def%
12655   } def%
12656   /H.A {%

```

```

12657      H.L. %
12658      currentpoint exch pop %
12659      vsize 72 sub exch %
12660      HyperBasePt add add%
12661      /pdf@voff exch def%
12662    } def%

pdf@ury = Yc + HyperBorder, pdf@urx = Xc + HyperBorder
12663    /H.R. {%
12664      currentpoint %
12665      HyperBorder add%
12666      /pdf@ury exch def %
12667      HyperBorder add%
12668      /pdf@urx exch def %
12669      currentpoint exch pop vsize 72 sub add%
12670      /pdf@voff exch def%
12671    } def%
12672  }%
12673 }

12674 \def\setpdfinkmargin#1{%
12675   \begingroup
12676   \setlength{\dimen@}{#1}%
12677   \literalps@out{%
12678     /HyperBorder{\strip@pt\dimen@}def%
12679   }%
12680   \endgroup
12681 }

12682 \</vtxpdfmark>

```

47.11 Textures

```

12683 \<*textures>
12684 \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.

```

12685 \begingroup
12686   \obeylines %
12687   \gdef\Hy@ps@CR{\noexpand
12688   }%
12689 \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`.

```
12690 \def\literalps@out#1{%
12691   \special{postscript 0 0 transform}%
12692   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12693 }%
12694 %
```

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.

```
12695 \def\headerps@out#1{%
12696   \special{%
12697     prepostscript TeXdict begin\Hy@ps@CR
12698     #1\Hy@ps@CR
12699     end%
12700   }%
12701 }%
12702 %
```

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.

```
12703 \g@addto@macro\Hy@FirstPageHook{%
12704   \headerps@out{%
12705     /betterpdfmark {%
12706       systemdict begin %
12707         dup /BP eq%
12708         {cleartomark gsave nulldevice []}%
12709         {dup /EP eq%
12710          {cleartomark cleartomark grestore}%
12711          {cleartomark}%
12712          ifelse%
12713        }ifelse %
12714      end%
12715    }def\Hy@ps@CR
12716    ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12717  }% end of \headerps@out
12718 }% end of \AtBeginShipoutFirst
12719 %
12720 \input{pdfmark.def}%
12721 %
12722 \ifx\@pdfproducer\relax
12723   \def\@pdfproducer{Textures + Distiller}%
12724 \fi
12725 \providecommand*\@pdfborder{0 0 1}
12726 \providecommand*\@pdfborderstyle{}
12727 \providecommand*\@pdfview{XYZ}
12728 \providecommand*\@pdfviewparams{ H.V}
12729 %
```

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 .

```
12730 \Hy@AtBeginDocument{%
```

```

12731 \headerps@out{%
Textures lives in normal points, I think. So conversion from one coordinate system
to another involves doing nothing.

12732 /vsize {\Hy@pageheight} def%
12733 /DvipsToPDF {} def%
12734 /PDFToDvips {} def%
12735 /BPToDvips {} def%
12736 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12737 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12738 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12739 /H.S {%
12740     currentpoint %
12741     HyperBorder add /pdf@lly exch def %
12742     dup DvipsToPDF 72 add /pdf@hoff exch def %
12743     HyperBorder sub /pdf@llx exch def%
12744 } def\Hy@ps@CR
12745 /H.L {%
12746     2 sub %
12747     PDFToDvips /HyperBase exch def %
12748     currentpoint %
12749     HyperBase sub /pdf@ury exch def%
12750     /pdf@urx exch def%
12751 } def\Hy@ps@CR
12752 /H.A {%
12753     H.L %
12754     currentpoint exch pop %
12755     vsize 72 sub exch DvipsToPDF %
12756     HyperBase sub % baseline skip
12757     sub /pdf@voff exch def%
12758 } def\Hy@ps@CR
12759 /H.R {%
12760     currentpoint %
12761     HyperBorder sub /pdf@ury exch def %
12762     HyperBorder add /pdf@urx exch def %
12763     currentpoint exch pop vsize 72 sub %
12764     exch DvipsToPDF sub /pdf@voff exch def%
12765 } def\Hy@ps@CR
12766 }%
12767 }

12768 \def\setpdfinkmargin#1{%
12769     \begingroup
12770     \setlength{\dimen@}{#1}%
12771     \literalps@out{%
12772         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12773     }%
12774     \endgroup
12775 }

12776 \Hy@AtBeginDocument{%
12777     \ifHy@colorlinks
12778     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12779     \fi
12780 }

```

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.

```

12781 \expandafter\let\expandafter\keepPDF@SetupDoc
12782 \csname PDF@SetupDoc\endcsname
12783 \def\PDF@SetupDoc{%
12784   \ifx\@baseurl\@empty
12785   \else
12786     \special{html:<base href="\@baseurl">}%
12787   \fi
12788   \keepPDF@SetupDoc
12789 }
12790 \Hy@WrapperDef\hyper@anchor#1{%
12791   \Hy@SaveLastskip
12792   \Hy@VerboseAnchor{#1}%
12793   \begingroup
12794     \let\protect=\string
12795     \special{html:<a name=%
12796       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12797   \endgroup
12798   \Hy@activeanchortrue
12799   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12800   \special{html:</a>}%
12801   \Hy@activeanchorfalse
12802   \Hy@RestoreLastskip
12803 }
12804 \Hy@WrapperDef\hyper@anchorstart#1{%
12805   \Hy@SaveLastskip
12806   \Hy@VerboseAnchor{#1}%
12807   \begingroup
12808     \hyper@chars
12809     \special{html:<a name=%
12810       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12811   \endgroup
12812   \Hy@activeanchortrue
12813 }
12814 \def\hyper@anchorend{%
12815   \special{html:</a>}%
12816   \Hy@activeanchorfalse
12817   \Hy@RestoreLastskip
12818 }
12819 \def\@urltype{url}
12820 \def\hyper@linkstart#1#2{%
12821   \Hy@VerboseLinkStart{#1}{#2}%
12822   \expandafter\Hy@colorlink\csname @#1color\endcsname
12823   \def\Hy@tempa{#1}%
12824   \ifx\Hy@tempa\@urltype
12825     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12826   \else
12827     \begingroup
12828       \hyper@chars
12829       \special{%
12830         html:<a href=%
12831           \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
12832       }%
12833     \endgroup
12834   \fi
12835 }
12836 \def\hyper@linkend{%
12837   \special{html:</a>}%

```

```

12838 \Hy@endcolorlink
12839 }
12840 \def\hyper@linkfile#1#2#3{%
12841 \hyper@linkurl{#1}{%
12842 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12843 }%
12844 }
12845 \def\hyper@linkurl#1#2{%
12846 \leavevmode
12847 \ifHy@raiselinks
12848 \Hy@SaveSpaceFactor
12849 \Hy@SaveSavedSpaceFactor
12850 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12851 \Hy@RestoreSavedSpaceFactor
12852 \@linkdim\dp\@tempboxa
12853 \lower\@linkdim\hbox{%
12854 \hyper@chars
12855 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12856 }%
12857 \Hy@colorlink\@urlcolor
12858 \Hy@RestoreSpaceFactor
12859 #1\Hy@xspace@end
12860 \Hy@SaveSpaceFactor
12861 \@linkdim\ht\@tempboxa
12862 \advance\@linkdim by -6.5\p@
12863 \raise\@linkdim\hbox{\special{html:</a>}}%
12864 \Hy@endcolorlink
12865 \Hy@RestoreSpaceFactor
12866 \else
12867 \begingroup
12868 \hyper@chars
12869 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12870 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12871 \special{html:</a>}}%
12872 \Hy@endcolorlink
12873 \endgroup
12874 \fi
12875 }

```

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

```

12876 \def\hyper@link#1#2#3{%
12877 \Hy@VerboseLinkStart{#1}{#2}%
12878 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
12879 }
12880 \def\hyper@image#1#2{%
12881 \begingroup
12882 \hyper@chars
12883 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
12884 \endgroup
12885 }
12886 </textures>

```

47.12 dvipsone

```

12887 % \subsection{dvipsone driver}
12888 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12889 % |\special| commands.
12890 (*dvipsone)

```

```

12891 \providecommand*\XR@ext\pdf{
12892 \let\Hy@raisedlink\ltx@empty
12893 \providecommand*\@pdfborder{0 0 1}
12894 \providecommand*\@pdfborderstyle{}
12895 \def\literalps@out#1{\special{ps:#1}}%
12896 \def\headerps@out#1{\special{headertext=#1}}%
12897 \input{pdfmark.def}%
12898 \HyInfo@AddonUnsupportedtrue
12899 \def\PDF@FinishDoc{%
12900   \Hy@UseMaketitleInfos
12901   \HyInfo@TrappedUnsupported
12902   \special{PDF: Keywords \@pdfkeywords}%
12903   \special{PDF: Title \@pdftitle}%
12904   \special{PDF: Creator \@pdfcreator}%
12905   \ifx\@pdfcreationdate\@empty
12906   \else
12907     \special{PDF: CreationDate \@pdfcreationdate}%
12908   \fi
12909   \ifx\@pdfmoddate\@empty
12910   \else
12911     \special{PDF: ModDate \@pdfmoddate}%
12912   \fi
12913   \special{PDF: Author \@pdfauthor}%
12914   \ifx\@pdfproducer\relax
12915   \else
12916     \special{PDF: Producer \@pdfproducer}%
12917   \fi
12918   \special{PDF: Subject \@pdfsubject}%
12919   \Hy@DisableOption{pdfauthor}%
12920   \Hy@DisableOption{pdftitle}%
12921   \Hy@DisableOption{pdfsubject}%
12922   \Hy@DisableOption{pdfcreator}%
12923   \Hy@DisableOption{addtopdfcreator}%
12924   \Hy@DisableOption{pdfcreationdate}%
12925   \Hy@DisableOption{pdfcreationdate}%
12926   \Hy@DisableOption{pdfmoddate}%
12927   \Hy@DisableOption{pdfproducer}%
12928   \Hy@DisableOption{pdfkeywords}%
12929   \Hy@DisableOption{pdftrapped}%
12930   \Hy@DisableOption{pdfinfo}%
12931 }
12932 \def\PDF@SetupDoc{%
12933   \def\Hy@temp{}%
12934   \ifx\@pdfstartpage\@empty
12935   \else
12936     \ifx\@pdfstartview\@empty
12937     \else
12938       \edef\Hy@temp{%
12939         ,Page=\@pdfstartpage
12940         ,View=\@pdfstartview
12941       }%
12942     \fi
12943   \fi
12944   \edef\Hy@temp{%
12945     \noexpand\pdfmark{%
12946       pdfmark=/DOCVIEW,%
12947       PageMode=/\@pdfpagemode

```



```

12948     \Hy@temp
12949   }%
12950 }%
12951 \Hy@temp
12952 \ifx\@pdfpagescrop\@empty
12953 \else
12954   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12955 \fi
12956 \edef\Hy@temp{%
12957   \ifHy@pdftoolbar\else /HideToolbar true\fi
12958   \ifHy@pdfmenubar\else /HideMenubar true\fi
12959   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12960   \ifHy@pdfwindow /FitWindow true\fi
12961   \ifHy@pdfcenterwindow /CenterWindow true\fi
12962   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12963   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12964   \Hy@UseNameKey{Direction}\@pdfdirection
12965   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12966   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12967   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12968   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12969   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12970   \Hy@UseNameKey{Duplex}\@pdfduplex
12971   \ifx\@pdfpicktraybypdfsize\@empty
12972     \else
12973     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12974   \fi
12975   \ifx\@pdfprintpagerange\@empty
12976     \else
12977     /PrintPageRange[\@pdfprintpagerange]%
12978   \fi
12979   \ifx\@pdfnumcopies\@empty
12980     \else
12981     /NumCopies \@pdfnumcopies
12982   \fi
12983 }%
12984 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12985 \pdfmark{%
12986   pdfmark=/PUT,%
12987   Raw={%
12988     \string{Catalog\string}<<%
12989     \ifx\Hy@temp\@empty
12990       \else
12991       /ViewerPreferences<<\Hy@temp>>%
12992     \fi
12993     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12994     \ifx\@pdflang\relax
12995       \else
12996       /Lang(\@pdflang)%
12997     \fi
12998     \ifx\@baseurl\@empty
12999       \else
13000       /URI<</Base(\Hy@pstringB)>>%
13001     \fi
13002     >>%
13003   }%
13004 }%

```

```

13005 }
13006 \providecommand*\@pdfview{XYZ}
13007 \providecommand*\@pdfviewparams{ %
13008   gsave revscl currentpoint grestore %
13009   72 add exch pop null exch null%
13010 }
13011 \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.

```

13012 \g@addto@macro\Hy@FirstPageHook{%
13013   \headerps@out{%

```

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

```

13014   /DvipsToPDF { 65781 div } def%
13015   /PDFToDvips { 65781 mul } def%
13016   /BPToDvips{65781 mul}def%
13017   /HyperBorder { 1 PDFToDvips } def%
13018   /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.

```

13019   /BorderArrayPatch{%
13020     [exch{%
13021       dup dup type/integertype eq exch type/realtype eq or%
13022       {BPToDvips}if%
13023     }forall]%
13024   }def%
13025   /H.S {%
13026     currentpoint %
13027     HyperBorder add /pdf@lly exch def %
13028     dup DvipsToPDF 72 add /pdf@hoff exch def %
13029     HyperBorder sub /pdf@llx exch def%
13030   } def%
13031   /H.L {%
13032     2 sub %
13033     PDFToDvips /HyperBase exch def %
13034     currentpoint %
13035     HyperBase sub /pdf@ury exch def%
13036     /pdf@urx exch def%
13037   } def%
13038   /H.A {%
13039     H.L %
13040     currentpoint exch pop %
13041     HyperBase sub % baseline skip
13042     DvipsToPDF /pdf@voff exch def%
13043   } def%
13044   /H.R {%
13045     currentpoint %
13046     HyperBorder sub /pdf@ury exch def %
13047     HyperBorder add /pdf@urx exch def %
13048     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13049   } def%
13050 }%
13051 }

```

```

13052 \def\setpdfinkmargin#1{%
13053   \begingroup
13054     \setlength{\dimen@}{#1}%
13055     \literalps@out{%
13056       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13057     }%
13058   \endgroup
13059 }

13060 </dvipsone>

```

47.13 TeX4ht

```

13061 (*tex4ht)
13062 \providecommand*\XR@ext>{html}
13063 \let\Hy@raisedlink\ltx@empty
13064 \@ifpackageloaded{tex4ht}{%
13065   \Hy@InfoNoLine{tex4ht is already loaded}%
13066 }{%
13067   \RequirePackage[hTeX4ht]{tex4ht}%
13068 }
13069 \hyperlinkfileprefix{}
13070 \let\PDF@FinishDoc\ltx@empty
13071 \def\PDF@SetupDoc{%
13072   \ifx\@baseurl\@empty
13073   \else
13074     \special{t4ht=<base href="\@baseurl">}%
13075   \fi
13076 }
13077 \Hy@WrapperDef\hyper@anchor#1{%
13078   \Hy@SaveLastskip
13079   \Hy@VerboseAnchor{#1}%
13080   \begingroup
13081     \let\protect=\string
13082     \special{t4ht=<a name=%
13083       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13084   \endgroup
13085   \Hy@activeanchortrue
13086   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13087   \special{t4ht=</a>}%
13088   \Hy@activeanchorfalse
13089   \Hy@RestoreLastskip
13090 }
13091 \Hy@WrapperDef\hyper@anchorstart#1{%
13092   \Hy@SaveLastskip
13093   \Hy@VerboseAnchor{#1}%
13094   \begingroup
13095     \hyper@chars\special{t4ht=<a name=%
13096       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13097   \endgroup
13098   \Hy@activeanchortrue
13099 }
13100 \def\hyper@anchorend{%
13101   \special{t4ht=</a>}%
13102   \Hy@activeanchorfalse
13103   \Hy@RestoreLastskip
13104 }
13105 \def\@urltype{url}
13106 \def\hyper@linkstart#1#2{%

```

```

13107 \Hy@VerboseLinkStart{#1}{#2}%
13108 \expandafter\Hy@colorlink\csname @#1color\endcsname
13109 \def\Hy@tempa{#1}%
13110 \ifx\Hy@tempa\@urltype
13111 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13112 \else
13113 \begingroup
13114 \hyper@chars
13115 \special{t4ht=<a href=%
13116 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
13117 \endgroup
13118 \fi
13119 }
13120 \def\hyper@linkend{%
13121 \special{t4ht=</a>}%
13122 \Hy@endcolorlink
13123 }
13124 \def\hyper@linkfile#1#2#3{%
13125 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13126 }
13127 \def\hyper@linkurl#1#2{%
13128 \leavevmode
13129 \ifHy@raiselinks
13130 \Hy@SaveSpaceFactor
13131 \Hy@SaveSavedSpaceFactor
13132 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13133 \Hy@RestoreSavedSpaceFactor
13134 \@linkdim\dp\@tempboxa
13135 \lower\@linkdim\hbox{%
13136 \begingroup
13137 \hyper@chars
13138 \special{%
13139 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13140 }%
13141 \endgroup
13142 }%
13143 \Hy@colorlink\@urlcolor
13144 \Hy@RestoreSpaceFactor
13145 #1\Hy@xspace@end
13146 \Hy@SaveSpaceFactor
13147 \Hy@endcolorlink
13148 \@linkdim\ht\@tempboxa
13149 \advance\@linkdim by -6.5\p@
13150 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13151 \Hy@RestoreSpaceFactor
13152 \else
13153 \begingroup
13154 \hyper@chars
13155 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13156 \Hy@colorlink\@urlcolor
13157 #1\Hy@xspace@end
13158 \Hy@endcolorlink
13159 \special{t4ht=</a>}%
13160 \endgroup
13161 \fi
13162 }

```

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

```

13163 \def\hyper@link#1#2#3{%
13164   \Hy@VerboseLinkStart{#1}{#2}%
13165   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
13166 }
13167 \def\hyper@image#1#2{%
13168   \begingroup
13169   \hyper@chars
13170   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13171   \endgroup
13172 }
13173 \let\autoref\ref
13174 \ifx \rEFLiNK \UnDef
13175   \def\rEFLiNK #1#2{#2}%
13176 \fi
13177 \let\backref\ltx@gobble

Fix for tex4ht.
13178 \AtBeginDocument{%
13179   \expandafter
13180   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13181   \expandafter\def\csname Make:Label\endcsname#1#2{%
13182     \ifhmode
13183       \Hy@SaveSpaceFactor
13184     \else
13185       \global\Hy@SavedSpaceFactor=1000 %
13186     \fi
13187     \Hy@OrgMakeLabel{#1}{%
13188       \Hy@RestoreSpaceFactor
13189       #2\Hy@xspace@end%
13190       \Hy@SaveSpaceFactor
13191     }%
13192     \Hy@RestoreSpaceFactor
13193   }%
13194 }
13195 </tex4ht>
13196 <*tex4htcfg>
13197 \IfFileExists{\jobname.cfg}{\endinput}{}
13198 \Preamble{html}
13199   \begin{document}%
13200 \EndPreamble
13201 \def\TeX{TeX}
13202 \def\OMEGA{\Omega}
13203 \def\LaTeX{LaTeX}
13204 \def\LaTeXe{\LaTeX2e}
13205 \def\eTeX{e-TeX}
13206 \def\MF{Metafont}
13207 \def\MP{MetaPost}
13208 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13209 <*pdfmark>
13210 \long\def\@Form[#1]{%
13211   \g@addto@macro\Hy@FirstPageHook{%
13212     \headerps@out{%
13213       [%

```

13214 /_objdef{pdfDocEncoding}%
13215 /type/dict%
13216 /OBJ pdfmark%
13217 [%
13218 {pdfDocEncoding}%
13219 <<%
13220 /Type/Encoding%
13221 /Differences[%
13222 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13223 /tilde %
13224 39/quotesingle %
13225 96/grave %
13226 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13227 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13228 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13229 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13230 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13231 164/currency %
13232 166/brokenbar %
13233 168/dieresis/copyright/ordfeminine %
13234 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13235 /twosuperior/threesuperior/acute/mu %
13236 183/periodcentered/cedilla/onesuperior/ordmasculine %
13237 188/onequarter/onehalf/threequarters %
13238 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13239 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13240 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13241 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13242 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13243 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13244 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13245 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13246 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13247 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13248]%
13249 >>%
13250 /PUT pdfmark%
13251 [%
13252 /_objdef{ZaDb}%
13253 /type/dict%
13254 /OBJ pdfmark%
13255 [%
13256 {ZaDb}%
13257 <<%
13258 /Type/Font%
13259 /Subtype/Type1%
13260 /Name/ZaDb%
13261 /BaseFont/ZapfDingbats%
13262 >>%
13263 /PUT pdfmark%
13264 [%
13265 /_objdef{Helv}%
13266 /type/dict%
13267 /OBJ pdfmark%
13268 [%
13269 {Helv}%
13270 <<%

```

13271 /Type/Font%
13272 /Subtype/Type1%
13273 /Name/Helv%
13274 /BaseFont/Helvetica%
13275 /Encoding{pdfDocEncoding}%
13276 >>%
13277 /PUT pdfmark%
13278 [%
13279 /__objdef{aform}%
13280 /type/dict%
13281 /OBJ pdfmark%
13282 [%
13283 /__objdef{afields}%
13284 /type/array%
13285 /OBJ pdfmark%
13286 [%
13287 /__objdef{corder}%
13288 /type/array%
13289 /OBJ pdfmark%
13290 {%
13291 [%
13292 /BBox[0 0 100 100]%
13293 /__objdef{Check}%
13294 /BP pdfmark %
13295 1 0 0 setrgbcolor%
13296 /ZapfDingbats 80 selectfont %
13297 20 20 moveto%
13298 (4)show%
13299 [/EP pdfmark%
13300 [%
13301 /BBox[0 0 100 100]%
13302 /__objdef{Cross}%
13303 /BP pdfmark %
13304 1 0 0 setrgbcolor%
13305 /ZapfDingbats 80 selectfont %
13306 20 20 moveto%
13307 (8)show%
13308 [/EP pdfmark%
13309 [%
13310 /BBox[0 0 250 100]%
13311 /__objdef{Submit}%
13312 /BP pdfmark %
13313 0.6 setgray %
13314 0 0 250 100 rectfill %
13315 1 setgray %
13316 2 2 moveto %
13317 2 98 lineto %
13318 248 98 lineto %
13319 246 96 lineto %
13320 4 96 lineto %
13321 4 4 lineto %
13322 fill %
13323 0.34 setgray %
13324 248 98 moveto %
13325 248 2 lineto %
13326 2 2 lineto %
13327 4 4 lineto %

```

```

13328 246 4 lineto %
13329 246 96 lineto %
13330 fill%
13331 /Helvetica 76 selectfont %
13332 0 setgray %
13333 8 22.5 moveto%
13334 (Submit)show%
13335 [/EP pdfmark%
13336 [%
13337 /BBox[0 0 250 100]%
13338 /_objdef{SubmitP}%
13339 /BP pdfmark %
13340 0.6 setgray %
13341 0 0 250 100 rectfill %
13342 0.34 setgray %
13343 2 2 moveto %
13344 2 98 lineto %
13345 248 98 lineto %
13346 246 96 lineto %
13347 4 96 lineto %
13348 4 4 lineto %
13349 fill %
13350 1 setgray %
13351 248 98 moveto %
13352 248 2 lineto %
13353 2 2 lineto %
13354 4 4 lineto %
13355 246 4 lineto %
13356 246 96 lineto %
13357 fill%
13358 /Helvetica 76 selectfont %
13359 0 setgray %
13360 10 20.5 moveto%
13361 (Submit)show%
13362 [/EP pdfmark%
13363 } ?pdfmark%
13364 [%
13365 {aform}%
13366 <<%
13367 /Fields{afields}%
13368 /DR<<%
13369 /Font<<%
13370 /ZaDb{ZaDb}%
13371 /Helv{Helv}%
13372 >>%
13373 >>%
13374 /DA(/Helv 10 Tf 0 g)%
13375 /CO{corder}%
13376 \ifHy@pdfa
13377 \else
13378 \ifHyField@NeedAppearances
13379 /NeedAppearances true%
13380 \fi
13381 \fi
13382 >>%
13383 /PUT pdfmark%
13384 [%

```



```

13385 {Catalog}%
13386 <<%
13387 /AcroForm{aform}%
13388 >>%
13389 /PUT pdfmark%
13390 }}%
13391 \kvsetkeys{Form}{#1}%
13392 }
13393 \let\@endForm\ltx@empty
13394 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13395 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13396 }

13397 \newcount\HyField@AnnotCount
13398 \HyField@AnnotCount=\z@
13399 \def\HyField@AdvanceAnnotCount{%
13400 \global\advance\HyField@AnnotCount\@ne
13401 }
13402 \def\HyField@TheAnnotCount{%
13403 \the\HyField@AnnotCount
13404 }

13405 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13406 \def\HyField@AddToFields#1{%
13407 \pdfmark{%
13408 pdfmark=/APPEND,%
13409 Raw={%
13410 \string{afields\string}%
13411 \string{#1\HyField@TheAnnotCount\string}%
13412 }%
13413 }%
13414 \ifx\Fld@calculate@code\ltx@empty
13415 \else
13416 \pdfmark{%
13417 pdfmark=/APPEND,%
13418 Raw={%
13419 \string{corder\string}%
13420 \string{#1\HyField@TheAnnotCount\string}%
13421 }%
13422 }%
13423 \fi
13424 }

13425 \def\@TextField[#1]#2{% parameters, label
13426 \def\Fld@name{#2}%
13427 \let\Fld@default\ltx@empty
13428 \let\Fld@value\@empty
13429 \def\Fld@width{\DefaultWidthofText}%
13430 \def\Fld@height{%
13431 \ifFld@multiline
13432 \DefaultHeightofTextMultiline
13433 \else
13434 \DefaultHeightofText
13435 \fi
13436 }%
13437 \begingroup
13438 \expandafter\HyField@SetKeys\expandafter{%
13439 \DefaultOptionsofText,#1%
13440 }%

```

```

13441 \HyField@FlagsText
13442 \ifFld@hidden\def\Fld@width{1sp}\fi
13443 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13444 \HyField@AdvanceAnnotCount
13445 \LayoutTextField{#2}{%
13446 \leavevmode
13447 \Hy@escapeform\PDFForm@Text
13448 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13449 pdfmark=/ANN,%
13450 objdef=text\HyField@TheAnnotCount,%
13451 Raw={\PDFForm@Text}%
13452 }%
13453 }%
13454 \HyField@AddToFields{text}%
13455 \endgroup
13456 }
13457 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13458 \def\Fld@name{#2}%
13459 \let\Fld@default\relax
13460 \let\Fld@value\relax
13461 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13462 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13463 \beginngroup
13464 \Fld@menulength=0 %
13465 \@tempdima\z@
13466 \@for\@curropt:=#3\do{%
13467 \expandafter\Fld@checkequals\@curropt==\%
13468 \Hy@StepCount\Fld@menulength
13469 \settowidth{\@tempdimb}{\@currDisplay}%
13470 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13471 }%
13472 \advance\@tempdima by 15\p@
13473 \beginngroup
13474 \HyField@SetKeys{#1}%
13475 \edef\x{\endgroup
13476 \noexpand\expandafter
13477 \noexpand\HyField@SetKeys
13478 \noexpand\expandafter{%
13479 \expandafter\noexpand\csname DefaultOptionsof%
13480 \ifFld@radio
13481 Radio%
13482 \else
13483 \ifFld@combo
13484 \ifFld@popdown
13485 PopdownBox%
13486 \else
13487 ComboBox%
13488 \fi
13489 \else
13490 ListBox%
13491 \fi
13492 \fi
13493 \endcsname
13494 }%
13495 }\x
13496 \HyField@SetKeys{#1}%
13497 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13498 \ifx\Fld@value\relax
13499 \let\Fld@value\Fld@default
13500 \fi
13501 \LayoutChoiceField{#2}{%
13502 \ifFld@radio
13503 \HyField@FlagsRadioButton
13504 \@@Radio{#3}%
13505 \else
13506 \beginngroup
13507 \HyField@FlagsChoice
13508 \ifdim\Fld@width<\@tempdima
13509 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13510 \edef\Fld@width{\the\@tempdima}%
13511 \fi
13512 \ifFld@combo
13513 \else
13514 \@tempdima=\the\Fld@menulength\Fld@charsize
13515 \advance\@tempdima by \Fld@borderwidth bp %
13516 \advance\@tempdima by \Fld@borderwidth bp %
13517 \edef\Fld@height{\the\@tempdima}%
13518 \fi
13519 \@@ListBox{#3}%
13520 \endgroup
13521 \fi
13522 }%
13523 \endgroup
13524 }
13525 \def\@@Radio#1{%
13526 \Fld@listcount=0 %
13527 \EdefEscapeName\Fld@default{\Fld@default}%
13528 \@for\@curropt:=#1\do{%
13529 \expandafter\Fld@checkequals\@curropt==\%
13530 \EdefEscapeName\@currValue{\@currValue}%
13531 \Hy@StepCount\Fld@listcount
13532 \@currDisplay\space
13533 \Hy@escapeform\PDFForm@Radio
13534 \ifnum\Fld@listcount=1 %
13535 \HyField@AdvanceAnnotCount
13536 \fi
13537 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13538 pdfmark=/ANN,%
13539 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13540 Raw={%
13541 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13542 }%
13543 } % deliberate space between radio buttons
13544 \ifnum\Fld@listcount=1 %
13545 \HyField@AddToFields{radio}%
13546 \fi
13547 }%
13548 }
13549 \newcount\Fld@listcount
13550 \def\@@ListBox#1{%
13551 \HyField@PDFChoices{#1}%
13552 \Hy@escapeform\PDFForm@List
13553 \HyField@AdvanceAnnotCount
13554 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%

```

```

13555 pdfmark=/ANN,%
13556 objdef=list\HyField@TheAnnotCount,%
13557 Raw={\PDFForm@List}%
13558 }%
13559 \HyField@AddToFields{list}%
13560 }
13561 \def\@PushButton[#1]#2{% parameters, label
13562 \def\Fld@name{#2}%
13563 \begingroup
13564 \expandafter\HyField@SetKeys\expandafter{%
13565 \DefaultOptionsofPushButton,#1%
13566 }%
13567 \ifHy@pdfa
13568 \Hy@Error{%
13569 PDF/A: Push button with JavaScript is prohibited%
13570 }\@ehc
13571 \LayoutPushButtonField{%
13572 \leavevmode
13573 \MakeButtonField{#2}%
13574 }%
13575 \else
13576 \HyField@FlagsPushButton
13577 \ifFld@hidden\def\Fld@width{1sp}\fi
13578 \HyField@AdvanceAnnotCount
13579 \LayoutPushButtonField{%
13580 \leavevmode
13581 \Hy@escapeform\PDFForm@Push
13582 \pdfmark[\MakeButtonField{#2}]{%
13583 pdfmark=/ANN,%
13584 objdef=push\HyField@TheAnnotCount,%
13585 Raw={\PDFForm@Push}%
13586 }%
13587 }%
13588 \HyField@AddToFields{push}%
13589 \fi
13590 \endgroup
13591 }
13592 \def\@Submit[#1]#2{%
13593 \def\Fld@width{\DefaultWidthofSubmit}%
13594 \def\Fld@height{\DefaultHeightofSubmit}%
13595 \begingroup
13596 \expandafter\HyField@SetKeys\expandafter{%
13597 \DefaultOptionsofSubmit,#1%
13598 }%
13599 \HyField@FlagsPushButton
13600 \HyField@FlagsSubmit
13601 \ifFld@hidden\def\Fld@width{1sp}\fi
13602 \Hy@escapeform\PDFForm@Submit
13603 \HyField@AdvanceAnnotCount
13604 \pdfmark[\MakeButtonField{#2}]{%
13605 pdfmark=/ANN,%
13606 objdef=submit\HyField@TheAnnotCount,%
13607 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13608 }%
13609 \HyField@AddToFields{submit}%
13610 \endgroup
13611 }

```

```

13612 \def\@Reset[#1]#2{%
13613   \def\Fld@width{\DefaultWidthofReset}%
13614   \def\Fld@height{\DefaultHeightofReset}%
13615   \begingroup
13616     \expandafter\HyField@SetKeys\expandafter{%
13617       \DefaultOptionsofReset,#1%
13618     }%
13619     \leavevmode
13620     \ifHy@pdfa
13621       \Hy@Error{%
13622         PDF/A: Reset action is prohibited%
13623       }\@ehc
13624       \MakeButtonField{#2}%
13625     \else
13626       \HyField@FlagsPushButton
13627       \ifFld@hidden\def\Fld@width{1sp}\fi
13628       \Hy@escapeform\PDFForm@Reset
13629       \HyField@AdvanceAnnotCount
13630       \pdfmark[\MakeButtonField{#2}]{%
13631         pdfmark=/ANN,%
13632         objdef=reset\HyField@TheAnnotCount,%
13633         Raw={\PDFForm@Reset}%
13634       }%
13635       \HyField@AddToFields{reset}%
13636     \fi
13637   \endgroup
13638 }%
13639 \def\@CheckBox[#1]#2{% parameters, label
13640   \def\Fld@name{#2}%
13641   \def\Fld@default{0}%
13642   \begingroup
13643     \def\Fld@width{\DefaultWidthofCheckBox}%
13644     \def\Fld@height{\DefaultHeightofCheckBox}%
13645     \expandafter\HyField@SetKeys\expandafter{%
13646       \DefaultOptionsofCheckBox,#1%
13647     }%
13648     \HyField@FlagsCheckBox
13649     \ifFld@hidden\def\Fld@width{1sp}\fi
13650     \HyField@AdvanceAnnotCount
13651     \LayoutCheckField{#2}{%
13652       \leavevmode
13653       \Hy@escapeform\PDFForm@Check
13654       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13655         pdfmark=/ANN,%
13656         objdef=check\HyField@TheAnnotCount,%
13657         Raw={\PDFForm@Check}%
13658       }%
13659     }%
13660     \HyField@AddToFields{check}%
13661   \endgroup
13662 }
13663 \pdfmark

```

48.2 HyperTeX

```

13664 \hypertex
13665 \def\@Form[#1]{%
13666   \Hy@Message{Sorry, HyperTeX does not support FORMs}%

```

```

13667 }
13668 \let\@endForm\ltx@empty
13669 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13670 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13671 }
13672 \def\@TextField[#1]#2{% parameters, label
13673 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13674 }
13675 \def\@CheckBox[#1]#2{% parameters, label
13676 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13677 }
13678 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13679 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13680 }
13681 \def\@PushButton[#1]#2{% parameters, label
13682 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13683 }
13684 \def\@Reset[#1]#2{%
13685 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13686 }
13687 \def\@Submit[#1]#2{%
13688 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13689 }
13690 \</hypertex>

```

48.3 TeX4ht

```

13691 \*tex4ht
13692 \def\@Form[#1]{%
13693 \kvsetkeys{Form}{#1}%
13694 \HCode{<form action="\Form@action" method="\Form@method">}%
13695 }
13696 \def\@endForm{\HCode{</form>}}
13697 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13698 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13699 }
13700 \def\@TextField[#1]#2{% parameters, label
13701 \let\Hy@reserved@a\@empty
13702 \def\Fld@name{#2}%
13703 \let\Fld@default\ltx@empty
13704 \bgroup
13705 \Field@toks={ }%
13706 \kvsetkeys{Field}{#1}%
13707 \HCode{<label for="\Fld@name">#2</label>}%
13708 \ifFld@password
13709 \@@PasswordField
13710 \else
13711 \@@TextField
13712 \fi
13713 \egroup
13714 }
13715 \def\@@PasswordField{%
13716 \HCode{%
13717 <input type="password" %
13718 id="\Fld@name" %
13719 name="\Fld@name" %
13720 \ifFld@hidden type="hidden" \fi
13721 value="\Fld@default" %

```

```

13722     \the\Field@toks
13723     >%
13724 }%
13725 }
13726 \def\@@TextField{%
13727   \ifFld@multiline
13728     \HCode{<textarea %
13729       \ifFld@readonly readonly \fi
13730       id="\Fld@name" %
13731       name="\Fld@name" %
13732       \ifFld@hidden type="hidden" \fi
13733       \the\Field@toks>%
13734     }%
13735     \Fld@default
13736     \HCode{</textarea>}%
13737   \else
13738     \HCode{<input type="text" %
13739       \ifFld@readonly readonly \fi
13740       id="\Fld@name" %
13741       name="\Fld@name" %
13742       \ifFld@hidden type="hidden" \fi
13743       value="\Fld@default" %
13744       \the\Field@toks>%
13745     }%
13746   \fi
13747 }
13748 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13749   \def\Fld@name{#2}%
13750   \let\Fld@default\ltx@empty
13751   \let\Hy@reserved@a\relax
13752   \begingroup
13753     \expandafter\Fld@findlength#3\\%
13754     \Field@toks={ }%
13755     \kvsetkeys{Field}{#1}%
13756     #2%
13757     \ifFld@radio
13758       \expandafter\@@Radio#3\\%
13759     \else
13760       \expandafter\@@Menu#3\\%
13761     \fi
13762   \endgroup
13763 }
13764 \def\Fld@findlength#1\\{%
13765   \Fld@menulength=0 %
13766   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13767 }
13768 \def\@@Menu#1\\{%
13769   \HCode{<select size="\the\Fld@menulength" %
13770     name="\Fld@name" %
13771     \the\Field@toks>%
13772   }%
13773   \@for\@curropt:=#1\do{%
13774     \expandafter\Fld@checkequals\@curropt==\\%
13775     \HCode{<option %
13776       \ifx\@curropt\Fld@default selected \fi
13777       value="\@currValue">\@currDisplay</option>%
13778     }%

```

```

13779 }%
13780 \HCode{</select>}%
13781 }
13782 \def\@@Radio#1\\{%
13783 \@for\@curropt:=#1\do{%
13784 \expandafter\Fld@checkequals\@curropt==\\%
13785 \HCode{<input type="radio" %
13786 \ifx\@curropt\Fld@default checked \fi
13787 name="\Fld@name" %
13788 value="\@currValue" %
13789 \the\Field@toks>%
13790 }%
13791 \@currDisplay
13792 }%
13793 }
13794 \def\@PushButton[#1]#2{% parameters, label
13795 \def\Fld@name{#2}%
13796 \bgroup
13797 \Field@toks={ }%
13798 \kvsetkeys{Field}{#1}%
13799 \HCode{<input type="button" %
13800 name="\Fld@name" %
13801 value="#2" %
13802 \the\Field@toks>%
13803 }%
13804 \HCode{</button>}%
13805 \egroup
13806 }
13807 \def\@Submit[#1]#2{%
13808 \HCode{<button type="submit">#2</button>}%
13809 }
13810 \def\@Reset[#1]#2{%
13811 \HCode{<button type="reset">#2</button>}%
13812 }
13813 \def\@CheckBox[#1]#2{% parameters, label
13814 \let\Hy@reserved@a\@empty
13815 \def\Fld@name{#2}%
13816 \def\Fld@default{0}%
13817 \bgroup
13818 \Field@toks={ }%
13819 \kvsetkeys{Field}{#1}%
13820 \HCode{<input type="checkbox" %
13821 \ifFld@checked checked \fi
13822 \ifFld@disabled disabled \fi
13823 \ifFld@readonly readonly \fi
13824 name="\Fld@name" %
13825 \ifFld@hidden type="hidden" \fi
13826 value="\Fld@default" %
13827 \the\Field@toks>%
13828 #2%
13829 }%
13830 \egroup
13831 }
13832 </tex4ht>

```

48.4 pdfTeX

```

13833 <*pdftex>

```



```

13834 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13835 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
13836 }
13837 \def\MakeFieldObject#1#2{\sbox0{#1}%
13838 \immediate\pdfxform0 %
13839 \expandafter\edef\csname #2Object\endcsname{%
13840 \the\pdfastxform\space 0 R%
13841 }%
13842 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13843 }%
13844 \let\HyField@afields\ltx@empty
13845 \let\HyField@cofields\ltx@empty
13846 \begingroup\expandafter\expandafter\expandafter\endgroup
13847 \expandafter\ifx\csname pdfastlink\endcsname\relax
13848 \let\HyField@AddToFields\relax
13849 \PackageInfo{hyperref}{%
13850 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13851 \MessageBreak
13852 Adobe Reader/Acrobat accepts an empty /Field array,%
13853 \MessageBreak
13854 but other PDF viewers might complain%
13855 }%
13856 \else
13857 \let\HyField@AuxAddToFields\ltx@gobble
13858 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13859 \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.

```

13860 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13861 \begingroup
13862 \Hy@safe@activestrue
13863 \let\ltx@secondoftwo\relax
13864 \ifx\HyField@cofields\ltx@empty
13865 \xdef\HyField@cofields{%
13866 \ltx@secondoftwo{#1}{ #2 0 R}%
13867 }%
13868 \else
13869 \let\ltx@secondoftwo\relax
13870 \def\HyField@AddCoField###1##2###3{%
13871 \ifx##1\ltx@empty
13872 \ltx@secondoftwo{#1}{ #2 0 R}%
13873 \expandafter\ltx@gobble
13874 \else
13875 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13876 \ltx@secondoftwo{#1}{ #2 0 R}%
13877 \ltx@secondoftwo{##2}{##3}%
13878 \expandafter\expandafter\expandafter\ltx@gobble
13879 \else
13880 \ltx@secondoftwo{##2}{##3}%
13881 \fi
13882 \fi
13883 \HyField@AddCoField
13884 }%
13885 \xdef\HyField@cofields{%
13886 \expandafter\HyField@AddCoField
13887 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13888 }%

```

```

13889 \fi
13890 \endgroup
13891 }%
13892 \Hy@AtBeginDocument{%
13893 \if@filesw
13894 \immediate\write\@mainaux{%
13895 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13896 }%
13897 \immediate\write\@mainaux{%
13898 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13899 }%
13900 \fi
13901 \let\HyField@AfterAuxOpen\@firstofone
13902 \def\HyField@AuxAddToFields#1{%
13903 \xdef\HyField@afields{%
13904 \ifx\HyField@afields\@empty
13905 \else
13906 \HyField@afields
13907 \space
13908 \fi
13909 #1 0 R%
13910 }%
13911 }%
13912 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13913 }%
13914 \def\HyField@AddToFields{%
13915 \expandafter\HyField@@AddToFields\expandafter{%
13916 \the\pdfastlink
13917 }%
13918 \ifx\Fld@calculate@code\ltx@empty
13919 \else
13920 \begingroup
13921 \Hy@safe@activestrue
13922 \edef\Hy@temp{%
13923 \endgroup
13924 \if@filesw
13925 \write\@mainaux{%
13926 \string\HyField@AuxAddToCoFields{%
13927 \Fld@calculate@sortkey
13928 }{%
13929 \the\pdfastlink
13930 }%
13931 }%
13932 \fi
13933 }%
13934 \Hy@temp
13935 \fi
13936 }%
13937 \def\HyField@@AddToFields#1{%
13938 \HyField@AfterAuxOpen{%
13939 \if@filesw
13940 \write\@mainaux{%
13941 \string\HyField@AuxAddToFields{#1}%
13942 }%
13943 \fi
13944 }%
13945 }%

```

```

13946 \fi
13947 \def\@Form[#1]{%
13948   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13949   \kvsetkeys{Form}{#1}%
13950   \pdf@ifdraftmode{}{%
13951     \Hy@FormObjects
13952     \ifnum\pdfTeXversion>13 %
13953       \pdfrefobj\OBJ@pdfdocencoding
13954       \pdfrefobj\OBJ@ZaDb
13955       \pdfrefobj\OBJ@Helv
13956     \fi
13957     \AtVeryEndDocument{%
13958       \immediate\pdfobj{%
13959         <<%
13960         /Fields[\HyField@afields]%
13961         \ifx\HyField@cofields\ltx@empty
13962         \else
13963           /CO[\romannumeral-`\Q\HyField@cofields]%
13964         \fi
13965         /DR<<%
13966         /Font<<%
13967         /ZaDb \OBJ@ZaDb\space 0 R%
13968         /Helv \OBJ@Helv\space 0 R%
13969         >>%
13970       >>%
13971       /DA(/Helv 10 Tf 0 g)%
13972       \ifHy@pdfa
13973       \else
13974         \ifHyField@NeedAppearances
13975         /NeedAppearances true%
13976       \fi
13977       \fi
13978       >>%
13979     }%
13980     \edef\OBJ@acroform{\the\pdflastobj}%
13981     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13982   }%
13983 }%
13984 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13985   \begingroup
13986   \fontfamily{pzd}%
13987   \fontencoding{U}%
13988   \fontseries{m}%
13989   \fontshape{n}%
13990   \selectfont
13991   \char123 %
13992   \endgroup
13993 }{Ding}%
13994 \MakeFieldObject{%
13995   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13996 }{Submit}%
13997 \MakeFieldObject{%
13998   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13999 }{SubmitP}%
14000 }
14001 \let\@endForm\ltx@empty

```

```

14002 \let\HyAnn@AbsPageLabel\ltx@empty
14003 \let\Fld@pageobjref\ltx@empty
14004 \ltx@ifUndefined{pdfpageref}{%
14005 }{%
14006 \ltx@ifpackageloaded{zref-abspage}{%
14007 \newcount\HyAnn@Count
14008 \HyAnn@Count=\ltx@zero
14009 \def\HyAnn@AbsPageLabel{%
14010 \global\advance\HyAnn@Count by\ltx@one
14011 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
14012 \zref@refused{HyAnn@\the\HyAnn@Count}%
14013 }%
14014 \def\Fld@pageobjref{%
14015 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
14016 }{%
14017 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
14018 /P \pdfpageref
14019 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
14020 \space 0 R%
14021 }{%
14022 }%
14023 }%
14024 }%
14025 }{%
14026 }%
14027 }

14028 \def\@TextField[#1]#2{% parameters, label
14029 \def\Fld@name{#2}%
14030 \let\Fld@default\ltx@empty
14031 \let\Fld@value\@empty
14032 \def\Fld@width{\DefaultWidthofText}%
14033 \def\Fld@height{%
14034 \ifFld@multiline
14035 \DefaultHeightofTextMultiline
14036 \else
14037 \DefaultHeightofText
14038 \fi
14039 }%
14040 \begingroup
14041 \expandafter\HyField@SetKeys\expandafter{%
14042 \DefaultOptionsofText,#1%
14043 }%
14044 \PDFForm@Name
14045 \HyField@FlagsText
14046 \ifFld@hidden\def\Fld@width{1sp}\fi
14047 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14048 \LayoutTextField{#2}{%
14049 \leavevmode
14050 \HyAnn@AbsPageLabel
14051 \Hy@escapeform\PDFForm@Text
14052 \pdfstartlink user {\PDFForm@Text}\relax
14053 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14054 \HyField@AddToFields
14055 }%
14056 \endgroup
14057 }
14058 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

14059 \def\Fld@name{#2}%
14060 \let\Fld@default\relax
14061 \let\Fld@value\relax
14062 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14063 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14064 \begingroup
14065 \Fld@menulength=0 %
14066 \@tempdima\z@
14067 \@for\@curropt:=#3\do{%
14068 \expandafter\Fld@checkequals\@curropt==\%
14069 \Hy@StepCount\Fld@menulength
14070 \settowidth{\@tempdimb}{\@currDisplay}%
14071 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14072 }%
14073 \advance\@tempdima by 15\p@
14074 \begingroup
14075 \HyField@SetKeys{#1}%
14076 \edef\x{\endgroup
14077 \noexpand\expandafter
14078 \noexpand\HyField@SetKeys
14079 \noexpand\expandafter{%
14080 \expandafter\noexpand\csname DefaultOptionsof%
14081 \ifFld@radio
14082 Radio%
14083 \else
14084 \ifFld@combo
14085 \ifFld@popdown
14086 PopdownBox%
14087 \else
14088 ComboBox%
14089 \fi
14090 \else
14091 ListBox%
14092 \fi
14093 \fi
14094 \endcsname
14095 }%
14096 }\x
14097 \HyField@SetKeys{#1}%
14098 \PDFForm@Name
14099 \ifFld@hidden\def\Fld@width{1sp}\fi
14100 \ifx\Fld@value\relax
14101 \let\Fld@value\Fld@default
14102 \fi
14103 \LayoutChoiceField{#2}{%
14104 \ifFld@radio
14105 \HyField@FlagsRadioButton
14106 \@@Radio{#3}%
14107 \else
14108 \begingroup
14109 \HyField@FlagsChoice
14110 \ifdim\Fld@width<\@tempdima
14111 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14112 \edef\Fld@width{\the\@tempdima}%
14113 \fi
14114 \ifFld@combo
14115 \else

```

```

14116      \@tempdima=\the\Fld@menulength\Fld@charsize
14117      \advance\@tempdima by \Fld@borderwidth bp %
14118      \advance\@tempdima by \Fld@borderwidth bp %
14119      \edef\Fld@height{\the\@tempdima}%
14120      \fi
14121      \@@ListBox{#3}%
14122      \endgroup
14123      \fi
14124      }%
14125      \endgroup
14126      }
14127      \def\@@Radio#1{%
14128      \Fld@listcount=0 %
14129      \EdefEscapeName\Fld@default{\Fld@default}%
14130      \@for\@curropt:=#1\do{%
14131      \expandafter\Fld@checkequals\@curropt==\%
14132      \EdefEscapeName\@currValue{\@currValue}%
14133      \Hy@StepCount\Fld@listcount
14134      \@currDisplay\space
14135      \leavevmode
14136      \HyAnn@AbsPageLabel
14137      \Hy@escapeform\PDFForm@Radio
14138      \pdfstartlink user {%
14139      \PDFForm@Radio
14140      /AP<<%
14141      /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.

```

14142      /\@currValue\space \DingObject
14143      >>%
14144      >>%
14145      }%
14146      \relax
14147      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14148      \ifnum\Fld@listcount=1 %
14149      \HyField@AddToFields
14150      \fi
14151      \space % deliberate space between radio buttons
14152      }%
14153      }
14154      \newcount\Fld@listcount
14155      \def\@@ListBox#1{%
14156      \HyField@PDFChoices{#1}%
14157      \leavevmode
14158      \HyAnn@AbsPageLabel
14159      \Hy@escapeform\PDFForm@List
14160      \pdfstartlink user {\PDFForm@List}\relax
14161      \MakeChoiceField{\Fld@width}{\Fld@height}%
14162      \pdfendlink
14163      \HyField@AddToFields
14164      }
14165      \def\@PushButton[#1]#2{% parameters, label
14166      \def\Fld@name{#2}%
14167      \begingroup
14168      \expandafter\HyField@SetKeys\expandafter{%
14169      \DefaultOptionsofPushButton,#1%

```

```

14170 }%
14171 \PDFForm@Name
14172 \ifHy@pdfa
14173 \Hy@Error{%
14174     PDF/A: Push button with JavaScript is prohibited%
14175 } \@ehc
14176 \LayoutPushButtonField{%
14177     \leavevmode
14178     \MakeButtonField{#2}%
14179 }%
14180 \else
14181 \HyField@FlagsPushButton
14182 \ifFld@hidden\def\Fld@width{1sp}\fi
14183 \LayoutPushButtonField{%
14184     \leavevmode
14185     \HyAnn@AbsPageLabel
14186     \Hy@escapeform\PDFForm@Push
14187     \pdfstartlink user {\PDFForm@Push}\relax
14188     \MakeButtonField{#2}%
14189     \pdfendlink
14190     \HyField@AddToFields
14191 }%
14192 \fi
14193 \endgroup
14194 }
14195 \def\@Submit[#1]#2{%
14196     \def\Fld@width{\DefaultWidthofSubmit}%
14197     \def\Fld@height{\DefaultHeightofSubmit}%
14198     \begingroup
14199     \expandafter\HyField@SetKeys\expandafter{%
14200         \DefaultOptionsofSubmit,#1%
14201     }%
14202     \HyField@FlagsPushButton
14203     \HyField@FlagsSubmit
14204     \ifFld@hidden\def\Fld@width{1sp}\fi
14205     \leavevmode
14206     \HyAnn@AbsPageLabel
14207     \Hy@escapeform\PDFForm@Submit
14208     \pdfstartlink user {%
14209         \PDFForm@Submit
14210         /AP<</N \SubmitObject/D \SubmitPObject>>%
14211     }%
14212     \relax
14213     \MakeButtonField{#2}%
14214     \pdfendlink
14215     \HyField@AddToFields
14216 \endgroup
14217 }
14218 \def\@Reset[#1]#2{%
14219     \def\Fld@width{\DefaultWidthofReset}%
14220     \def\Fld@height{\DefaultHeightofReset}%
14221     \begingroup
14222     \expandafter\HyField@SetKeys\expandafter{%
14223         \DefaultOptionsofReset,#1%
14224     }%
14225     \leavevmode
14226     \ifHy@pdfa

```

```

14227 \Hy@Error{%
14228     PDF/A: Reset action is prohibited%
14229 } \@ehc
14230 \MakeButtonField{#2}%
14231 \else
14232 \HyField@FlagsPushButton
14233 \ifFld@hidden\def\Fld@width{1sp}\fi
14234 \HyAnn@AbsPageLabel
14235 \Hy@escapeform\PDFForm@Reset
14236 \pdfstartlink user {\PDFForm@Reset}\relax
14237 \MakeButtonField{#2}%
14238 \pdfendlink
14239 \HyField@AddToFields
14240 \fi
14241 \endgroup
14242 }
14243 \def\@CheckBox[#1]#2{% parameters, label
14244 \def\Fld@name{#2}%
14245 \def\Fld@default{0}%
14246 \begingroup
14247 \def\Fld@width{\DefaultWidthofCheckBox}%
14248 \def\Fld@height{\DefaultHeightofCheckBox}%
14249 \expandafter\HyField@SetKeys\expandafter{%
14250 \DefaultOptionsofCheckBox,#1%
14251 }%
14252 \PDFForm@Name
14253 \HyField@FlagsCheckBox
14254 \ifFld@hidden\def\Fld@width{1sp}\fi
14255 \LayoutCheckField{#2}{%
14256 \leavevmode
14257 \HyAnn@AbsPageLabel
14258 \Hy@escapeform\PDFForm@Check
14259 \pdfstartlink user {\PDFForm@Check}\relax
14260 \MakeCheckField{\Fld@width}{\Fld@height}%
14261 \pdfendlink
14262 \HyField@AddToFields
14263 }%
14264 \endgroup
14265 }
14266 \def\Hy@FormObjects{%
14267 \pdfobj {%
14268 <<%
14269 /Type/Encoding%
14270 /Differences[%
14271 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14272 /ring/tilde %
14273 39/quotesingle %
14274 96/grave %
14275 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14276 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14277 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14278 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14279 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14280 164/currency %
14281 166/brokenbar %
14282 168/dieresis/copyright/ordfeminine %
14283 172/logicalnot/.notdef/registered/macron/degree/plusminus%

```



```

14284      /twosuperior/threesuperior/acute/mu %
14285      183/periodcentered/cedilla/onesuperior/ordmasculine %
14286      188/onequarter/onehalf/threequarters %
14287      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14288      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14289      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14290      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14291      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14292      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14293      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14294      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14295      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14296      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14297      ]%
14298      >>%
14299      }%
14300      \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
14301      \pdfobj{%
14302      <<%
14303      /Type/Font%
14304      /Subtype/Type1%
14305      /Name/ZaDb%
14306      /BaseFont/ZapfDingbats%
14307      >>%
14308      }%
14309      \xdef\OBJ@ZaDb{\the\pdfflastobj}%
14310      \pdfobj{%
14311      <<%
14312      /Type/Font%
14313      /Subtype/Type1%
14314      /Name/Helv%
14315      /BaseFont/Helvetica%
14316      /Encoding \OBJ@pdfdocencoding\space 0 R%
14317      >>%
14318      }%
14319      \xdef\OBJ@Helv{\the\pdfflastobj}%
14320      \global\let\Hy@FormObjects\relax
14321      }
14322      </pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14323 (*dvipdfm | xetex)

```

\@Gauge

```

14324 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14325   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14326 }

```

\@Form

```

14327 \def\@Form[#1]{%
14328   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14329   \kvsetkeys{Form}{#1}%
14330   \Hy@FormObjects
14331   \@pdfm@mark{obj @afields []}%
14332   \@pdfm@mark{obj @corder []}%

```

```

14333 \@pdfm@mark{%
14334   obj @aform <<%
14335     /Fields @afields%
14336     /DR<<%
14337     /Font<<%
14338     /ZaDb @OBJZaDb%
14339     /Helv @OBJHelv%
14340     >>%
14341     >>%
14342     /DA(/Helv 10 Tf 0 g)%
14343     /CO @corder%
14344     \ifHy@pdfa
14345     \else
14346       \ifHyField@NeedAppearances
14347         /NeedAppearances true%
14348       \fi
14349     \fi
14350     >>%
14351   }%
14352 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14353 }

```

\@endForm

```

14354 \let\@endForm\ltx@empty

```

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

```

14355 \def\dvipdfm@setdim{%
14356   height \the\ht\pdfm@box\space
14357   width \the\wd\pdfm@box\space
14358   depth \the\dp\pdfm@box\space
14359 }

```

\HyField@AnnotCount

```

14360 \newcount\HyField@AnnotCount
14361 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14362 \def\HyField@AdvanceAnnotCount{%
14363   \global\advance\HyField@AnnotCount\@ne
14364 }

```

\HyField@TheAnnotCount

```

14365 \def\HyField@TheAnnotCount{%
14366   \the\HyField@AnnotCount
14367 }

```

\Fld@pageobjref

```

14368 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

14369 \def\HyField@AddToFields#1{%
14370   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14371   \ifx\Fld@calculate@code\ltx@empty
14372   \else
14373     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14374   \fi
14375 }

```

\@TextField

```

14376 \def\@TextField[#1]#2{% parameters, label
14377   \def\Fld@name{#2}%
14378   \let\Fld@default\ltx@empty
14379   \let\Fld@value\@empty
14380   \def\Fld@width{\DefaultWidthofText}%
14381   \def\Fld@height{%
14382     \ifFld@multiline
14383       \DefaultHeightofTextMultiline
14384     \else
14385       \DefaultHeightofText
14386     \fi
14387   }%
14388   \begingroup
14389     \expandafter\HyField@SetKeys\expandafter{%
14390       \DefaultOptionsofText,#1%
14391     }%
14392     \PDFForm@Name
14393     \HyField@FlagsText
14394     \ifFld@hidden\def\Fld@width{1sp}\fi
14395     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14396     \setbox\pdfm@box=\hbox{%
14397       \MakeTextField{\Fld@width}{\Fld@height}%
14398     }%
14399     \HyField@AdvanceAnnotCount
14400     \LayoutTextField{#2}{%
14401       \leavevmode
14402       \Hy@escapeform\PDFForm@Text
14403       \@pdfm@mark{%
14404         ann @text\HyField@TheAnnotCount\space
14405         \dvipdfm@setdim << \PDFForm@Text >>%
14406       }%
14407     }%
14408     \unhbox\pdfm@box
14409     \HyField@AddToFields{text}%
14410     % record in @afields array
14411   \endgroup
14412 }

```

\@ChoiceMenu

```

14413 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14414   \def\Fld@name{#2}%
14415   \let\Fld@default\relax
14416   \let\Fld@value\relax
14417   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14418   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14419   \begingroup
14420     \Fld@menulength=0 %
14421     \@tempdima\z@
14422     \@for\@curropt:=#3\do{%
14423       \expandafter\Fld@checkequals\@curropt==\%
14424       \Hy@StepCount\Fld@menulength
14425       \settowidth{\@tempdimb}{\@currDisplay}%
14426       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14427     }%
14428     \advance\@tempdima by 15\p@
14429   \begingroup

```

```

14430 \HyField@SetKeys{#1}%
14431 \edef\x{\endgroup
14432 \noexpand\expandafter
14433 \noexpand\HyField@SetKeys
14434 \noexpand\expandafter{%
14435 \expandafter\noexpand\csname DefaultOptionsof%
14436 \ifFld@radio
14437 Radio%
14438 \else
14439 \ifFld@combo
14440 \ifFld@popdown
14441 PopdownBox%
14442 \else
14443 ComboBox%
14444 \fi
14445 \else
14446 ListBox%
14447 \fi
14448 \fi
14449 \endcsname
14450 }%
14451 }\x
14452 \HyField@SetKeys{#1}%
14453 \PDFForm@Name
14454 \ifFld@hidden\def\Fld@width{1sp}\fi
14455 \ifx\Fld@value\relax
14456 \let\Fld@value\Fld@default
14457 \fi
14458 \LayoutChoiceField{#2}{%
14459 \ifFld@radio
14460 \HyField@FlagsRadioButton
14461 \@@Radio{#3}%
14462 \else
14463 \begingroup
14464 \HyField@FlagsChoice
14465 \ifdim\Fld@width<\@tempdima
14466 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14467 \edef\Fld@width{\the\@tempdima}%
14468 \fi
14469 \ifFld@combo
14470 \else
14471 \@tempdima=\the\Fld@menulength\Fld@charsize
14472 \advance\@tempdima by \Fld@borderwidth bp %
14473 \advance\@tempdima by \Fld@borderwidth bp %
14474 \edef\Fld@height{\the\@tempdima}%
14475 \fi
14476 \@@ListBox{#3}%
14477 \endgroup
14478 \fi
14479 }%
14480 \endgroup
14481 }

```

\@@Radio

```

14482 \def\@@Radio#1{%
14483 \Fld@listcount=0 %
14484 \EdefEscapeName\Fld@default{\Fld@default}%
14485 \setbox\pdfm@box=\hbox{%

```

```

14486 \MakeRadioField{\Fld@width}{\Fld@height}%
14487 }%
14488 \@for\@curropt:=#1\do{%
14489 \expandafter\Fld@checkequals\@curropt==\%
14490 \EdefEscapeName\@currValue{\@currValue}%
14491 \Hy@StepCount\Fld@listcount
14492 \@currDisplay\space
14493 \leavevmode
14494 \Hy@escapeform\PDFForm@Radio
14495 \ifnum\Fld@listcount=1 %
14496 \HyField@AdvanceAnnotCount
14497 \fi
14498 \@pdfm@mark{%
14499 ann %
14500 \ifnum\Fld@listcount=1 %
14501 @radio\HyField@TheAnnotCount%
14502 \space
14503 \fi
14504 \dvipdfm@setdim
14505 <<%
14506 \PDFForm@Radio
14507 /AP<</N<</\@currValue /null>>>>%
14508 >>%
14509 }%
14510 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14511 \ifnum\Fld@listcount=1 %
14512 \HyField@AddToFields{radio}%
14513 \fi
14514 }%
14515 }

\Fld@listcount
14516 \newcount\Fld@listcount

@@@Listbox
14517 \def\@@Listbox#1{%
14518 \HyField@PDFChoices{#1}%
14519 \setbox\pdfm@box=\hbox{%
14520 \MakeChoiceField{\Fld@width}{\Fld@height}%
14521 }%
14522 \leavevmode
14523 \Hy@escapeform\PDFForm@List
14524 \HyField@AdvanceAnnotCount
14525 \@pdfm@mark{%
14526 ann @list\HyField@TheAnnotCount\space
14527 \dvipdfm@setdim
14528 <<\PDFForm@List>>%
14529 }%
14530 \unhbox\pdfm@box
14531 \HyField@AddToFields{list}%
14532 }

\@PushButton
14533 \def\@PushButton[#1]#2{% parameters, label
14534 \def\Fld@name{#2}%
14535 \begingroup
14536 \expandafter\HyField@SetKeys\expandafter{%

```

```

14537 \DefaultOptionsofPushButton,#1%
14538 }%
14539 \PDFForm@Name
14540 \ifHy@pdfa
14541 \Hy@Error{%
14542 PDF/A: Push button with JavaScript is prohibited%
14543 } \@ehc
14544 \LayoutPushButtonField{%
14545 \leavevmode
14546 \MakeButtonField{#2}%
14547 }%
14548 \else
14549 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14550 \HyField@FlagsPushButton
14551 \ifFld@hidden\def\Fld@width{1sp}\fi
14552 \HyField@AdvanceAnnotCount
14553 \LayoutPushButtonField{%
14554 \leavevmode
14555 \Hy@escapeform\PDFForm@Push
14556 \@pdfm@mark{%
14557 ann @push\HyField@TheAnnotCount\space
14558 \dvipdfm@setdim
14559 <<\PDFForm@Push>>%
14560 }%
14561 }%
14562 \unhbox\pdfm@box
14563 \HyField@AddToFields{push}%
14564 \fi
14565 \endgroup
14566 }

\@Submit
14567 \def\@Submit[#1]#2{%
14568 \def\Fld@width{\DefaultWidthofSubmit}%
14569 \def\Fld@height{\DefaultHeightofSubmit}%
14570 \begingroup
14571 \expandafter\HyField@SetKeys\expandafter{%
14572 \DefaultOptionsofSubmit,#1%
14573 }%
14574 \HyField@FlagsPushButton
14575 \HyField@FlagsSubmit
14576 \ifFld@hidden\def\Fld@width{1sp}\fi
14577 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14578 \leavevmode
14579 \Hy@escapeform\PDFForm@Submit
14580 \HyField@AdvanceAnnotCount
14581 \@pdfm@mark{%
14582 ann @submit\HyField@TheAnnotCount\space
14583 \dvipdfm@setdim
14584 <<\PDFForm@Submit>>%
14585 }%
14586 \unhbox\pdfm@box%
14587 \HyField@AddToFields{submit}%
14588 \endgroup
14589 }

\@Reset

```

```

14590 \def\@Reset[#1]#2{%
14591   \def\Fld@width{\DefaultWidthofReset}%
14592   \def\Fld@height{\DefaultHeightofReset}%
14593   \begingroup
14594     \expandafter\HyField@SetKeys\expandafter{%
14595       \DefaultOptionsofReset,#1%
14596     }%
14597     \leavevmode
14598     \ifHy@pdfa
14599       \Hy@Error{%
14600         PDF/A: Reset action is prohibited%
14601       }\@ehc
14602       \MakeButtonField{#2}%
14603     \else
14604       \HyField@FlagsPushButton
14605       \ifFld@hidden\def\Fld@width{1sp}\fi
14606       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14607       \Hy@escapeform\PDFForm@Reset
14608       \HyField@AdvanceAnnotCount
14609       \@pdfm@mark{%
14610         ann @reset\HyField@TheAnnotCount\space
14611         \dvipdfm@setdim
14612         <<\PDFForm@Reset>>%
14613       }%
14614       \unhbox\pdfm@box
14615       \HyField@AddToFields{reset}%
14616     \fi
14617   \endgroup
14618 }

```

\@CheckBox

```

14619 \def\@CheckBox[#1]#2{% parameters, label
14620   \def\Fld@name{#2}%
14621   \def\Fld@default{0}%
14622   \begingroup
14623     \def\Fld@width{\DefaultWidthofCheckBox}%
14624     \def\Fld@height{\DefaultHeightofCheckBox}%
14625     \expandafter\HyField@SetKeys\expandafter{%
14626       \DefaultOptionsofCheckBox,#1%
14627     }%
14628     \PDFForm@Name
14629     \HyField@FlagsCheckBox
14630     \ifFld@hidden\def\Fld@width{1sp}\fi
14631     \setbox\pdfm@box=\hbox{%
14632       \MakeCheckField{\Fld@width}{\Fld@height}%
14633     }%
14634     \HyField@AdvanceAnnotCount
14635     \LayoutCheckField{#2}{%
14636       \leavevmode
14637       \Hy@escapeform\PDFForm@Check
14638       \@pdfm@mark{%
14639         ann @check\HyField@TheAnnotCount\space
14640         \dvipdfm@setdim
14641         <<\PDFForm@Check>>%
14642       }%
14643       \unhbox\pdfm@box
14644       \HyField@AddToFields{check}%
14645     }%

```

```

14646 \endgroup
14647 }

14648 \def\Hy@FormObjects{%
14649 \@pdfm@mark{obj @OBJpdfdocencoding%
14650 <<%
14651 /Type/Encoding%
14652 /Differences[%
14653 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14654 39/quotesingle %
14655 96/grave %
14656 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14657 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14658 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14659 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14660 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14661 164/currency %
14662 166/brokenbar %
14663 168/dieresis/copyright/ordfeminine %
14664 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14665 /twosuperior/threesuperior/acute/mu %
14666 183/periodcentered/cedilla/onesuperior/ordmasculine %
14667 188/onequarter/onehalf/threequarters %
14668 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14669 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14670 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14671 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14672 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14673 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14674 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14675 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14676 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14677 /thorn/ydieresis%
14678 ]%
14679 >>%
14680 }%
14681 \@pdfm@mark{obj @OBJZaDb%
14682 <<%
14683 /Type/Font%
14684 /Subtype/Type1%
14685 /Name/ZaDb%
14686 /BaseFont/ZapfDingbats%
14687 >>%
14688 }%
14689 \@pdfm@mark{obj @OBJHelv%
14690 <<%
14691 /Type/Font%
14692 /Subtype/Type1%
14693 /Name/Helv%
14694 /BaseFont/Helvetica%
14695 /Encoding @OBJpdfdocencoding%
14696 >>%
14697 }%
14698 \global\let\Hy@FormObjects\relax
14699 }
14700 </dvipdfm | xetex>

```


48.6 Common forms part

```
14701 \<*pdfform>

\Fld@pageobjref
14702 \providecommand*\Fld@pageobjref{}

\Hy@escapestring
14703 \begingroup\expandafter\expandafter\expandafter\endgroup
14704 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14705   \let\Hy@escapestring\@firstofone
14706   \def\Hy@escapeform#1{%
14707     \ifHy@pdfescapeform
14708       \def\Hy@escapestring##1{%
14709         \noexpand\Hy@escapestring{\noexpand##1}%
14710       }%
14711     \edef\Hy@temp{#1}%
14712     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14713   \def\Hy@escapestring##1{%
14714     \@ifundefined{Hy@esc@\string##1}{%
14715       ##1%
14716       \ThisShouldNotHappen
14717     }{%
14718       \csname Hy@esc@\string##1\endcsname
14719     }%
14720   }%
14721   \else
14722     \let\Hy@escapestring\@firstofone
14723   \fi
14724 }%
14725 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
14726   \ifx\#3\%
14727     \else
14728       \expandafter
14729       \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14730       \ltx@ReturnAfterFi{%
14731         \Hy@@@escapeform#3\@nil
14732       }%
14733     \fi
14734   }%
14735   \else
14736     \def\Hy@escapeform#1{%
14737       \ifHy@pdfescapeform
14738         \let\Hy@escapestring\pdfescapestring
14739       \else
14740         \let\Hy@escapestring\@firstofone
14741       \fi
14742     }%
14743     \Hy@escapeform{}%
14744   \fi

\PDFForm@Name
14745 \def\PDFForm@Name{%
14746   \PDFForm@@Name\Fld@name
14747   \ifx\Fld@altname\relax
14748   \else
14749     \PDFForm@@Name\Fld@altname
14750   \fi
```

```

14751 \ifx\Fld@mappingname\relax
14752 \else
14753 \PDFForm@@Name\Fld@mappingname
14754 \fi
14755 }

```

\PDFForm@@Name

```

14756 \def\PDFForm@@Name#1{%
14757 \begingroup
14758 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14759 \ifHy@unicode
14760 \Hy@unicodetrue
14761 \fi
14762 \fi
14763 \HyPsd@XeTeXBigCharstrue
14764 \pdfstringdef\Hy@gtemp#1%
14765 \endgroup
14766 \let#1\Hy@gtemp
14767 }

```

\Fld@additionalactions

```

14768 \def\Fld@@additionalactions{%
K input (keystroke) format
14769 \ifx\Fld@keystroke@code\@empty
14770 \else
14771 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14772 \fi
F display format
14773 \ifx\Fld@format@code\@empty
14774 \else
14775 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14776 \fi
V validation
14777 \ifx\Fld@validate@code\@empty
14778 \else
14779 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14780 \fi
C calculation
14781 \ifx\Fld@calculate@code\@empty
14782 \else
14783 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14784 \fi
Fo receiving the input focus
14785 \ifx\Fld@onfocus@code\@empty
14786 \else
14787 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14788 \fi
Bl loosing the input focus (blurred)
14789 \ifx\Fld@onblur@code\@empty
14790 \else
14791 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14792 \fi

```

D pressing the mouse button (down)

```
14793 \ifx\Fld@onmousedown@code\@empty
14794 \else
14795 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14796 \fi
```

U releasing the mouse button (up)

```
14797 \ifx\Fld@onmouseup@code\@empty
14798 \else
14799 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14800 \fi
```

E cursor enters the annotation's active area.

```
14801 \ifx\Fld@onenter@code\@empty
14802 \else
14803 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14804 \fi
```

X cursor exits the annotation's active area.

```
14805 \ifx\Fld@onexit@code\@empty
14806 \else
14807 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14808 \fi
14809 }
14810 \def\Fld@additionalactions{%
14811 \if-\Fld@@additionalactions-%
14812 \else
14813 \ifHy@pdfa
14814 \else
14815 /AA<<\Fld@@additionalactions>>%
14816 \fi
14817 \fi
14818 }
```

\Fld@annotnames

```
14819 \def\Fld@annotnames{%
14820 /T(\Fld@name)%
14821 \ifx\Fld@altname\relax
14822 \else
14823 /TU(\Fld@altname)%
14824 \fi
14825 \ifx\Fld@mappingname\relax
14826 \else
14827 /TM(\Fld@mappingname)%
14828 \fi
14829 }
```

\PDFForm@Check

```
14830 \def\PDFForm@Check{%
14831 /Subtype/Widget%
14832 \Fld@annotflags
14833 \Fld@pageobjref
14834 \Fld@annotnames
14835 /FT/Btn%
14836 \Fld@flags
14837 /Q \Fld@align
14838 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14839 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
```

```

14840 /MK<<%
14841   \ifnum\Fld@rotation=\z@
14842   \else
14843     /R \Fld@rotation
14844   \fi
14845   \ifx\Fld@bordercolor\relax
14846   \else
14847     /BC[\Fld@bordercolor]%
14848   \fi
14849   \ifx\Fld@bcolor\relax
14850   \else
14851     /BG[\Fld@bcolor]%
14852   \fi
14853   /CA(\Hy@escapestring{\Fld@cbsymbol})%
14854 >>%
14855 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14856   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14857 /H/P%
14858 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14859 \Fld@additionalactions
14860 }

```

\PDFForm@Push

```

14861 \ifHy@pdfa
14862 \else
14863   \def\PDFForm@Push{%
14864     /Subtype/Widget%
14865     \Fld@annotflags
14866     \Fld@pageobjref
14867     \Fld@annotnames
14868     /FT/Btn%
14869     \Fld@flags
14870     /H/P%
14871     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14872     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14873       \ifx\Fld@bordercolor\relax\else 1\fi
14874       \space
14875     \else
14876       /MK<<%
14877       \ifnum\Fld@rotation=\z@
14878       \else
14879         /R \Fld@rotation
14880       \fi
14881       \ifx\Fld@bordercolor\relax
14882       \else
14883         /BC[\Fld@bordercolor]%
14884       \fi
14885       >>%
14886     \fi
14887     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14888     \Fld@additionalactions
14889   }%
14890 \fi

```

\PDFForm@List

```

14891 \def\PDFForm@List{%
14892   /Subtype/Widget%

```

```

14893 \Fld@annotflags
14894 \Fld@pageobjref
14895 \Fld@annotnames
14896 /FT/Ch%
14897 \Fld@flags
14898 /Q \Fld@align
14899 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14900 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14901     \ifx\Fld@bordercolor\relax\else 1\fi
14902     \ifx\Fld@bcolor\relax \else 1\fi
14903     \space
14904 \else
14905     /MK<<%
14906     \ifnum\Fld@rotation=\z@
14907     \else
14908     /R \Fld@rotation
14909     \fi
14910     \ifx\Fld@bordercolor\relax
14911     \else
14912     /BC[\Fld@bordercolor]%
14913     \fi
14914     \ifx\Fld@bcolor\relax
14915     \else
14916     /BG[\Fld@bcolor]%
14917     \fi
14918 >>%
14919 \fi
14920 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14921     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14922 \Fld@choices
14923 \Fld@additionalactions
14924 }

```

\PDFForm@Radio

```

14925 \def\PDFForm@Radio{%
14926 /Subtype/Widget%
14927 \Fld@annotflags
14928 \Fld@pageobjref
14929 \Fld@annotnames
14930 /FT/Btn%
14931 \Fld@flags
14932 /H/P%
14933 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14934 /MK<<%
14935     \ifnum\Fld@rotation=\z@
14936     \else
14937     /R \Fld@rotation
14938     \fi
14939     \ifx\Fld@bordercolor\relax
14940     \else
14941     /BC[\Fld@bordercolor]%
14942     \fi
14943     \ifx\Fld@bcolor\relax
14944     \else
14945     /BG[\Fld@bcolor]%
14946     \fi
14947     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14948 >>%

```

```

14949 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14950 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14951 \ifx\Fld@default\@empty
14952 /V/Off%
14953 /DV/Off%
14954 \else
14955 /V/\Fld@default
14956 /DV/\Fld@default
14957 \fi
14958 \Fld@additionalactions
14959 }

```

\PDFForm@Text

```

14960 \def\PDFForm@Text{%
14961 /Subtype/Widget%
14962 \Fld@annotflags
14963 \Fld@pageobjref
14964 \Fld@annotnames
14965 /FT/Tx%
14966 \Fld@flags
14967 /Q \Fld@align
14968 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14969 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14970 \ifx\Fld@bordercolor\relax\else 1\fi
14971 \ifx\Fld@bcolor\relax \else 1\fi
14972 \space
14973 \else
14974 /MK<<%
14975 \ifnum\Fld@rotation=\z@
14976 \else
14977 /R \Fld@rotation
14978 \fi
14979 \ifx\Fld@bordercolor\relax
14980 \else
14981 /BC[\Fld@bordercolor]%
14982 \fi
14983 \ifx\Fld@bcolor\relax
14984 \else
14985 /BG[\Fld@bcolor]%
14986 \fi
14987 >>%
14988 \fi
14989 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14990 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14991 /DV(\Hy@escapestring{\Fld@default})%
14992 /V(\Hy@escapestring{\Fld@value})%
14993 \Fld@additionalactions
14994 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14995 }

```

\PDFForm@Submit

```

14996 \def\PDFForm@Submit{%
14997 /Subtype/Widget%
14998 \Fld@annotflags
14999 \Fld@pageobjref
15000 \Fld@annotnames

```

```

15001 /FT/Btn%
15002 \Fld@flags
15003 /H/P%
15004 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15005 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15006 \ifx\Fld@bordercolor\relax\else 1\fi
15007 \space
15008 \else
15009 /MK<<%
15010 \ifnum\Fld@rotation=\z@
15011 \else
15012 /R \Fld@rotation
15013 \fi
15014 \ifx\Fld@bordercolor\relax
15015 \else
15016 /BC[\Fld@bordercolor]%
15017 \fi
15018 >>%
15019 \fi
15020 /A<<%
15021 /S/SubmitForm%
15022 /F<<%
15023 /FS/URL%
15024 /F(\Hy@escapestring{\Form@action})%
15025 >>%
15026 \Fld@submitflags
15027 >>%
15028 \Fld@additionalactions
15029 }

```

\PDFForm@Reset

```

15030 \ifHy@pdfa
15031 \else
15032 \def\PDFForm@Reset{%
15033 /Subtype/Widget%
15034 \Fld@annotflags
15035 \Fld@pageobjref
15036 \Fld@annotnames
15037 /FT/Btn%
15038 \Fld@flags
15039 /H/P%
15040 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15041 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15042 \ifx\Fld@bordercolor\relax\else 1\fi
15043 \space
15044 \else
15045 /MK<<%
15046 \ifnum\Fld@rotation=\z@
15047 \else
15048 /R \Fld@rotation
15049 \fi
15050 \ifx\Fld@bordercolor\relax
15051 \else
15052 /BC[\Fld@bordercolor]%
15053 \fi
15054 % /CA (Clear)
15055 % /AC (Done)
15056 >>%

```

```

15057 \fi
15058 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15059 /A<</S/ResetForm>>%
15060 \Fld@additionalactions
15061 }%
15062 \fi

15063 </pdfform>
15064 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

15065 \def\phantomsection{%
15066 \Hy@MakeCurrentHrefAuto{section*}%
15067 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15068 }
15069 </package>

```

49.1 Bookmarks

```
15070 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -T_EX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -T_EX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

15071 \def\Hy@writebookmark#1#2#3#4#5{%
15072 % section number, text, label, level, file
15073 \ifx\WriteBookmarks\relax%
15074 \else
15075 \ifnum#4>\Hy@bookmarksdepth\relax
15076 \else
15077 \@@@writetorep{#1}{#2}{#3}{#4}{#5}%
15078 \fi
15079 \fi

```



```

15080 }
15081 \def\Hy@currentbookmarklevel{0}
15082 \def\Hy@numberline#1{#1 }
15083 \def\@writetorep#1#2#3#4#5{%
15084   \begingroup
15085     \edef\Hy@tempa{#5}%
15086     \ifx\Hy@tempa\Hy@bookmarkstype
15087       \edef\Hy@level{#4}%
15088       \ifx\Hy@levelcheck Y%
15089         \@tempcnta\Hy@level\relax
15090         \advance\@tempcnta by -1 %
15091         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15092           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15093           \advance\@tempcnta by 1 %
15094           \Hy@Warning{%
15095             Difference (\the\@tempcnta) between bookmark levels is %
15096             greater \MessageBreak than one, level fixed%
15097           }%
15098           \@tempcnta\Hy@currentbookmarklevel
15099           \advance\@tempcnta by 1 %
15100           \edef\Hy@level{\the\@tempcnta}%
15101         \fi
15102       \else
15103         \global\let\Hy@levelcheck Y%
15104       \fi
15105       \global\let\Hy@currentbookmarklevel\Hy@level
15106       \@tempcnta\Hy@level\relax
15107       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15108       \advance\@tempcnta by -1 %
15109       \edef\Hy@tempa{#3}%
15110       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15111       \ifx\Hy@tempa\Hy@tempb
15112         \Hy@Warning{%
15113           The anchor of a bookmark and its parent's must not%
15114           \MessageBreak be the same. Added a new anchor%
15115         }%
15116       \phantomsection
15117     \fi
15118     \ifHy@bookmarksnumbered
15119       \let\numberline\Hy@numberline
15120       \let\booknumberline\Hy@numberline
15121       \let\partnumberline\Hy@numberline
15122       \let\chapternumberline\Hy@numberline
15123     \else
15124       \let\numberline\@gobble
15125       \let\booknumberline\@gobble
15126       \let\partnumberline\@gobble
15127       \let\chapternumberline\@gobble
15128     \fi
15129     \HyPsd@XeTeXBigCharstrue
15130     \pdfstringdef\Hy@tempa{#2}%
15131     \HyPsd@SanitizeForOutFile\Hy@tempa
15132     \if@filesw
15133       \stepcounter{bookmark@seq@number}%
15134       \@ifundefined{@outlinefile}{%
15135         }{%
15136           \protected@write\@outlinefile{}{%

```

```

15137         \protect\BOOKMARK
15138         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15139         {\Hy@tempa}{\Hy@tempb}%
15140         \@percentchar\space\thebookmark@seq@number
15141     }%
15142 }%
15143 \fi
15144 \fi
15145 \endgroup
15146 }
15147 \newcounter{bookmark@seq@number}

15148 \begingroup
15149 \lccode`=(`{ %
15150 \lccode`=)`} %
15151 \lccode`1=\z@
15152 \lccode`2=\z@
15153 \lccode`3=\z@
15154 \lccode`5=\z@
15155 \lccode`7=\z@
15156 \lccode`\#=\z@
15157 \lccode``=\z@
15158 \lccode`\{=\z@
15159 \lccode`\}= \z@
15160 \lowercase{%
15161 \endgroup
15162 \def\HyPsd@SanitizeForOutFile#1{%
15163     \@onelevel@sanitize\Hy@tempa
15164     \escapechar`\\ %
15165     \edef\Hy@tempa{%
15166         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15167     }%
15168     \edef\Hy@tempa{%
15169         \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15170     }%
15171 }%
15172 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15173     #1%
15174     \ifx\#2\%
15175         \expandafter\ltx@gobble
15176     \else
15177         \expandafter\ltx@firstofone
15178     \fi
15179     {%
15180         \string\173%
15181         \HyPsd@SanitizeOut@BraceLeft#2\@nil
15182     }%
15183 }%
15184 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15185     #1%
15186     \ifx\#2\%
15187         \expandafter\ltx@gobble
15188     \else
15189         \expandafter\ltx@firstofone
15190     \fi
15191     {%
15192         \string\175%
15193         \HyPsd@SanitizeOut@BraceRight#2\@nil

```

```

15194 }%
15195 }%
15196 }

```

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

```

15197 \newcommand{\currentpdfbookmark}{%
15198   \pdfbookmark[\Hy@currentbookmarklevel]%
15199 }
15200 \newcommand{\subpdfbookmark}{%
15201   \@tempcnta\Hy@currentbookmarklevel
15202   \Hy@StepCount\@tempcnta
15203   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15204 }
15205 \newcommand{\belowpdfbookmark}[2]{%
15206   \@tempcnta\Hy@currentbookmarklevel
15207   \Hy@StepCount\@tempcnta
15208   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15209   \advance\@tempcnta by -1 %
15210   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15211 }

```

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.

```

15212 \renewcommand\pdfbookmark[3][0]{%
15213   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15214   \hyper@anchorstart{#3.#1}\hyper@anchorend
15215 }
15216 \def\BOOKMARK{%
15217   \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15218 }
15219 \def\@BOOKMARK[#1]{%
15220   \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15221 }

```

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
```

```

15222 \RequirePackage{rerunfilecheck}[2009/12/10]
15223 \def\Hy@OutlineRerunCheck{%
15224   \RerunFileCheck{\jobname.out}{%
15225     \immediate\closeout\@outlinefile
15226   }{%
15227     Rerun to get outlines right\MessageBreak
15228     or use package `bookmark'%
15229   }%
15230 }

```

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.

```

15231 \*vtex>
15232 \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.

```

15233 \begingroup
15234 \catcode\'=12 %
15235 \ifnum\Hy@VTeXversion<650 %
15236 \catcode\"=12 %
15237 \gdef\hv@pdf@char#1#2#3{%
15238 \char
15239 \ifcase'#1#2#3 %
15240 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15241 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15242 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15243 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15244 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15245 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15246 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15247 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15248 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15249 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15250 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15251 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15252 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15253 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15254 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15255 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15256 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15257 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15258 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15259 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15260 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15261 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15262 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15263 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15264 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15265 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15266 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15267 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15268 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15269 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15270 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15271 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15272 \fi
15273 }%
15274 \else
15275 \gdef\hv@pdf@char{\char'}%
15276 \fi
15277 \endgroup

```

\@@BOOKMARK

```

15278 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15279 \expandafter\edef\csname @count@#3\endcsname{%
15280 \the\@serial@counter
15281 }%

```

```

15282 \edef\@mycount{\the\@serial@counter}%
15283 \Hy@StepCount\@serial@counter
15284 \edef\@parcount{%
15285   \expandafter\ifx\csname @count@#5\endcsname\relax
15286     0%
15287   \else
15288     \csname @count@#5\endcsname
15289   \fi
15290 }%
15291 \immediate\special{%
15292   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15293   s=\ifx#2-c\else o\fi,t=#4%
15294 }%
15295 }%

```

\ReadBookmarks

```

15296 \def\ReadBookmarks{%
15297   \begingroup
15298   \def\0{\hv@pdf@char 0}%
15299   \def\1{\hv@pdf@char 1}%
15300   \def\2{\hv@pdf@char 2}%
15301   \def\3{\hv@pdf@char 3}%
15302   \def\({}%
15303   \def\)}%
15304   \def\do##1{%
15305     \ifnum\catcode`##1=\active
15306       \@makeother##1%
15307     \else
15308       \ifnum\catcode`##1=6 %
15309         \@makeother##1%
15310       \fi
15311     \fi
15312   }%
15313   \dospecials
15314   \Hy@safe@activetrue
15315   \InputIfFileExists{\jobname.out}{\}{}%
15316 \endgroup
15317 \ifx\WriteBookmarks\relax
15318 \else
15319   \if@filesw
15320     \newwrite\@outlinefile
15321     \Hy@OutlineRerunCheck
15322     \immediate\openout\@outlinefile=\jobname.out\relax
15323     \ifHy@typexml
15324       \immediate\write\@outlinefile{<relaxxml>\relax}%
15325     \fi
15326   \fi
15327 \fi
15328 }

15329 </vtex>

15330 <*\vtex>
15331 \def\ReadBookmarks{%
15332   \pdf@ifdraftmode{\}%
15333   \begingroup
15334     \def\do##1{%
15335       \ifnum\catcode`##1=\active

```

```

15336      \@makeother##1%
15337      \else
15338      \ifnum\catcode`##1=6 %
15339      \@makeother##1%
15340      \fi
15341      \fi
15342    }%
15343    \dospecials
15344    \Hy@safe@activetrue
15345    \escapechar=`\%
15346    \def\@BOOKMARK[##1][##2]##3##4##5{%
15347      \calc@bm@number{##5}%
15348    }%
15349    \InputIfFileExists{\jobname.out}{-}{-}%
15350    \ifx\WriteBookmarks\relax
15351      \global\let\WriteBookmarks\relax
15352    \fi
15353    \def\@BOOKMARK[##1][##2]##3##4##5{%
15354      \def\Hy@temp{##4}%
15355    (*pdfTeX)
15356      \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15357      \Hy@OutlineName{}\Hy@pstringName{%
15358        ##2\check@bm@number{##3}%
15359      }{%
15360        \expandafter\strip@prefix\meaning\Hy@temp
15361      }%
15362    \}

```

```

15393     \def\WriteBookmarks{0}%
15394     \InputIfFileExists{\jobname.out}{-}{-}%
15395     \endgroup
15396     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15397     \endgroup
15398 }%
15399 \ifx\WriteBookmarks\relax
15400 \else
15401     \if@files
15402         \newwrite\@outlinefile
15403         \Hy@OutlineRerunCheck
15404         \immediate\openout\@outlinefile=\jobname.out\relax
15405         \ifHy@typexml
15406             \immediate\write\@outlinefile{<relaxxml>\relax}%
15407         \fi
15408     \fi
15409 \fi
15410 }
15411 <*pdfTeX>
15412 \def\Hy@OutlineName#1#2#3#4{%
15413     \pdfoutline goto name{#2}count#3{#4}%
15414 }
15415 </pdfTeX>
15416 \def\check@bm@number#1{%
15417     \expandafter\ifx\csname B_#1\endcsname\relax
15418         0%
15419     \else
15420         \csname B_#1\endcsname
15421     \fi
15422 }
15423 \def\calc@bm@number#1{%
15424     \@tempcnta=\check@bm@number{#1}\relax
15425     \advance\@tempcnta by 1 %
15426     \expandafter\xdef\csname B_#1\endcsname{the\@tempcnta}%
15427 }
15428 </!vTeX>

15429 \ifHy@implicit
15430 \else
15431     \expandafter\endinput
15432 \fi

15433 </outlines>
15434 <*outlines | hypertex>

15435 \newlength\Hy@SectionHShift
15436 \def\Hy@SectionAnchorHref#1{%
15437     \ifx\protect\@typeset@protect
15438         \Hy@@@SectionAnchor{#1}%
15439     \fi
15440 }
15441 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15442     \leavevmode
15443     \hbox to 0pt{%
15444         \kern-\Hy@SectionHShift
15445         \Hy@raisedlink{%
15446             \hyper@anchorstart{#1}\hyper@anchorend
15447         }%
15448         \hss

```

```

15449 }%
15450 }
15451 \let\H@old@ssect\@ssect
15452 \def\@ssect#1#2#3#4#5{%
15453   \Hy@MakeCurrentHrefAuto{section*}%
15454   \setlength{\Hy@SectionHShift}{#1}%
15455   \begingroup
15456     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15457     \toks\tw@\expandafter{%
15458       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15459       #5%
15460     }%
15461   \edef\x{\endgroup
15462     \the\toks@{\the\toks\tw@}}%
15463 } \x
15464 }
15465 \let\H@old@schapter\@schapter
15466 \def\@schapter#1{%
15467   \begingroup
15468     \let\@mkboth\@gobbletwo
15469     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15470     \Hy@raisedlink{%
15471       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15472     }%
15473   \endgroup
15474   \H@old@schapter{#1}%
15475 }

```

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:

```

15476 \ltx@ifundefined{@chapter}{}{%
15477   \let\Hy@org@chapter\@chapter
15478   \def\@chapter{%
15479     \def\Hy@next{%
15480       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15481       \Hy@raisedlink{%
15482         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15483       }%
15484     }%
15485     \ifnum\c@secnumdepth>\m@ne
15486       \ltx@ifundefined{if@mainmatter}%
15487       \iftrue{\csname if@mainmatter\endcsname}%
15488       \let\Hy@next\relax
15489     \fi
15490     \fi
15491     \Hy@next
15492     \Hy@org@chapter
15493   }%
15494 }
15495 \let\H@old@part\@part
15496 \begingroup\expandafter\expandafter\expandafter\endgroup
15497 \expandafter\ifx\csname chapter\endcsname\relax
15498   \let\Hy@secnum@part\z@
15499 \else
15500   \let\Hy@secnum@part\m@ne
15501 \fi

```



```

15502 \def\@part{%
15503   \ifnum\Hy@secnum@part>\c@secnumdepth
15504     \phantomsection
15505   \fi
15506   \H@old@part
15507 }

15508 \let\H@old@spart\@spart
15509 \def\@spart#1{%
15510   \Hy@MakeCurrentHrefAuto{part*}%
15511   \Hy@raisedlink{%
15512     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15513   }%
15514   \H@old@spart{#1}%
15515 }

15516 \let\H@old@sect\@sect
15517 \def\@sect#1#2#3#4#5#6[#7]#8{%
15518   \ifnum #2>\c@secnumdepth
15519     \expandafter\@firstoftwo
15520   \else
15521     \expandafter\@secondoftwo
15522   \fi
15523   {%
15524     \Hy@MakeCurrentHrefAuto{section*}%
15525     \setlength{\Hy@SectionHShift}{#3}%
15526     \begingroup
15527       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15528       \toks\tw@\expandafter{%
15529         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15530         #8%
15531       }%
15532       \edef\x{\endgroup
15533         \the\toks@{\the\toks\tw@}}%
15534       }\x
15535     }%
15536     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15537   }%
15538 }

15539 </outlines | hypertex>
15540 <*outlines>

15541 \expandafter\def\csname Parent-4\endcsname{}
15542 \expandafter\def\csname Parent-3\endcsname{}
15543 \expandafter\def\csname Parent-2\endcsname{}
15544 \expandafter\def\csname Parent-1\endcsname{}
15545 \expandafter\def\csname Parent0\endcsname{}
15546 \expandafter\def\csname Parent1\endcsname{}
15547 \expandafter\def\csname Parent2\endcsname{}
15548 \expandafter\def\csname Parent3\endcsname{}
15549 \expandafter\def\csname Parent4\endcsname{}

15550 </outlines>

```

50 Compatibility with koma-script classes

```
15551 <*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.

```

15552 \def\Hy@tempa{%
15553   \def\@addchap[##1]##2{%
15554     \typeout{##2}%
15555     \if@twoside
15556       \@mkboth{##1}{}%
15557     \else
15558       \@mkboth{}{##1}%
15559     \fi
15560     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15561     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15562     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15563     \Hy@raisedlink{%
15564       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15565     }%
15566     \if@twocolumn
15567       \@topnewpage[\@makeschapterhead{##2}]%
15568     \else
15569       \@makeschapterhead{##2}%
15570       \@afterheading
15571     \fi
15572     \addcontentsline{toc}{chapter}{##1}%
15573   }%
15574 }
15575 \@ifclassloaded{scrbook}{%
15576   \@ifclasslater{scrbook}{2001/01/01}{%
15577     \let\Hy@tempa\@empty
15578   }{}%
15579 }{%
15580   \@ifclassloaded{scrreprt}{%
15581     \@ifclasslater{scrreprt}{2001/01/01}{%
15582       \let\Hy@tempa\@empty
15583     }{}%
15584   }{%
15585     \let\Hy@tempa\@empty
15586   }%
15587 }%
15588 \Hy@tempa
15589 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15590 <*pd1enc>
15591 \DeclareFontEncoding{PD1}{}{}

Accents
15592 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15593 \DeclareTextAccent{\'}{PD1}{\textacute}
15594 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15595 \DeclareTextAccent{\~}{PD1}{\texttilde}
15596 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}

```

```

15597 \DeclareTextAccent{\r}{PD1}{\textring}
15598 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15599 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15600 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15601 \DeclareTextAccent{\=} {PD1}{\textasciimacron}
15602 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15603 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15604 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15605 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15606 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15607 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15608 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15609 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15610 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15611 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15612 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15613 \DeclareTextCompositeCommand{\=} {PD1}{\@empty}{\textasciimacron}
15614 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15615 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15616 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15617 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15618 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15619 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15620 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15621 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15622 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15623 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15624 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15625 \DeclareTextCompositeCommand{\=} {PD1}{\ }{\textasciimacron}
15626 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15627 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15628 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15629 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15630 \DeclareTextCommand{\newtie}{PD1}[1]{%
15631 \TextSymbolUnavailable{\newtie{#1}}#1%
15632 }

```

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

```

15633 % U+0009 (CHARACTER TABULATION)
15634 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15635 % U+000A (LINE FEED)
15636 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15637 % U+000D (CARRIAGE RETURN)
15638 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15639 % U+02D8 BREVE; breve
15640 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15641 % U+02C7 CARON; caron
15642 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15643 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15644 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15645 % U+02D9 DOT ABOVE; dotaccent
15646 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15647 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15648 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15649 % U+02DB OGONEK; ogonek
15650 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

```

15651 % U+02DA RING ABOVE; ring
 15652 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15653 % U+02DC SMALL TILDE; ilde, *tilde
 15654 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15655 % U+0022 QUOTATION MARK; quotedbl
 15656 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15657 % U+0023 NUMBER SIGN; numbersign
 15658 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15659 % U+0024 DOLLAR SIGN; dollar
 15660 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15661 % U+0025 PERCENT SIGN; percent
 15662 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15663 % U+0026 AMPERSAND; ampersand
 15664 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15665 % U+0028 LEFT PARENTHESIS; parenleft
 15666 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 15667 % U+0029 RIGHT PARENTHESIS; parenright
 15668 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 15669 % U+002E FULL STOP; period
 15670 \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
 15671 % U+003C LESS-THAN SIGN; less
 15672 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15673 % U+003E GREATER-THAN SIGN; greater
 15674 \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
 15675 % U+005C REVERSE SOLIDUS; backslash
 15676 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15677 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15678 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15679 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15680 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15681 % U+005F LOW LINE; underscore

15682 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15683 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15684 % U+0060 GRAVE ACCENT; grave
15685 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
15686 % U+0069 LATIN SMALL LETTER I; i
15687 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
15688 % U+007B LEFT CURLY BRACKET; braceleft
15689 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
15690 % U+007C VERTICAL LINE; *bar, verticalbar
15691 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
15692 % U+007D RIGHT CURLY BRACKET; braceright
15693 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15694 % U+007E TILDE; asciitilde
15695 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
15696 % U+2022 BULLET; bullet
15697 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
15698 % U+2020 DAGGER; dagger
15699 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
15700 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
15701 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
15702 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
15703 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15704 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
15705 % U+2014 EM DASH; emdash
15706 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
15707 % U+2013 EN DASH; endash
15708 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
15709 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15710 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
15711 % U+2044 FRACTION SLASH; fraction
15712 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
15713 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
15714 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
15715 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
inglright
15716 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
15717 % U+2212 MINUS SIGN; minus
15718 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
15719 % U+2030 PER MILLE SIGN; perthousand
15720 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15721 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15722 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15723 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15724 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15725 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15726 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15727 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15728 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

15729 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15730 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15731 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15732 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15733 % U+2122 TRADE MARK SIGN; trademark
 15734 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15735 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15736 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15737 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15738 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15739 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15740 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15741 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15742 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15743 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15744 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15745 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15746 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 15747 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15748 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15749 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15750 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15751 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15752 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15753 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15754 % U+0153 LATIN SMALL LIGATURE OE; oe
 15755 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15756 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15757 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15758 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15759 \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.
 15760 % U+20AC EURO SIGN; *Euro, euro
 15761 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15762 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15763 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15764 % U+00A2 CENT SIGN; cent
 15765 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15766 % U+00A3 POUND SIGN; sterling
 15767 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15768 % U+00A4 CURRENCY SIGN; currency
 15769 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15770 % U+00A5 YEN SIGN; yen
 15771 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15772 % U+00A6 BROKEN BAR; brokenbar
 15773 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15774 % U+00A7 SECTION SIGN; section
 15775 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15776 % U+00A8 DIAERESIS; dieresis
 15777 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15778 % U+00A9 COPYRIGHT SIGN; copyright
 15779 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15780 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15781 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15782 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft

15783 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15784 % U+00AC NOT SIGN; logicalnot
 15785 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15786 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15787 % U+00AE REGISTERED SIGN; registered
 15788 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15789 % U+00AF MACRON; *macron, overscore
 15790 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15791 % U+00B0 DEGREE SIGN; degree
 15792 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15793 % U+00B1 PLUS-MINUS SIGN; plusminus
 15794 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15795 % U+00B2 SUPERSCRIFT TWO; twosuperior
 15796 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15797 % U+00B3 SUPERSCRIFT THREE; threesuperior
 15798 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15799 % U+00B4 ACUTE ACCENT; acute
 15800 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15801 % U+00B5 MICRO SIGN; mu, mul
 15802 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15803 % U+00B6 PILCROW SIGN; paragraph
 15804 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 15805 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15806 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 15807 % U+00B8 CEDILLA; cedilla
 15808 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 15809 % U+00B9 SUPERSCRIFT ONE; onesuperior
 15810 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 15811 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15812 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 15813 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 15814 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 15815 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15816 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 15817 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 15818 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 15819 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 15820 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 15821 % U+00BF INVERTED QUESTION MARK; questiondown
 15822 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 15823 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 15824 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 15825 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 15826 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 15827 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 15828 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 15829 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 15830 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 15831 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 15832 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
 15833 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 15834 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 15835 % U+00C6 LATIN CAPITAL LETTER AE; AE
 15836 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 15837 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

15838 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15839 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15840 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15841 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15842 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15843 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15844 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15845 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15846 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15847 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15848 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15849 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15850 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15851 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15852 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15853 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15854 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15855 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15856 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15857 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15858 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15859 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15860 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15861 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15862 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15863 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15864 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15865 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15866 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15867 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15868 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15869 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15870 % U+00D7 MULTIPLICATION SIGN; multiply
15871 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15872 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15873 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15874 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15875 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15876 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15877 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15878 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15879 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15880 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15881 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15882 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15883 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15884 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15885 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15886 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15887 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15888 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15889 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15890 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15891 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15892 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15893 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15894 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2

15895 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15896 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15897 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15898 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15899 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15900 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15901 % U+00E6 LATIN SMALL LETTER AE; ae
15902 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15903 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15904 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15905 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15906 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15907 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15908 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15909 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15910 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15911 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15912 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15913 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15914 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15915 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15916 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15917 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15918 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15919 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15920 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15921 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15922 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15923 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15924 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15925 % U+00F0 LATIN SMALL LETTER ETH; eth
15926 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15927 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15928 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15929 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15930 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15931 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15932 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15933 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15934 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15935 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15936 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15937 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15938 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15939 % U+00F7 DIVISION SIGN; divide
15940 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15941 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15942 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15943 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15944 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15945 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15946 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15947 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15948 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15949 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15950 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15951 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute

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15952 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15953 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15954 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15955 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15956 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15957 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15958 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15959 \DeclareTextCommand{\SS}{PD1}{SS}%
15960 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15961 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15962 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15963 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15964 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15965 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15966 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15967 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15968 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15969 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15970 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15971 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15972 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15973 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15974 \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).

```

15975 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15976 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15977 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15978 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15979 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15980 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15981 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15982 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15983 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15984 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15985 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15986 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15987 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15988 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

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15989 </pd1enc>

```

51.2 PU encoding

```

15990 (*puenc)
15991 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15992 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15993 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15994 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15995 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15996 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb

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15997 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
15998 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15999 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
16000 % U+0304 COMBINING MACRON; macroncmb
16001 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
16002 % U+0306 COMBINING BREVE; brevecmb
16003 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
16004 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
16005 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
16006 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
16007 % U+0308 COMBINING DIAERESIS; dieresiscmb
16008 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
16009 % U+030A COMBINING RING ABOVE; ringcmb
16010 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
16011 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
16012 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
16013 % U+030C COMBINING CARON; caroncmb
16014 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
16015 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
16016 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
16017 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
16018 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16019 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
16020 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
16021 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16022 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
16023 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
16024 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
16025 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
16026 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
16027 % U+0327 COMBINING CEDILLA; cedillacmb
16028 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
16029 % U+0328 COMBINING OGONEK; ogonekcmb
16030 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
16031 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
16032 % \textsubcircum (tipa)
16033 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
16034 % U+032E COMBINING BREVE BELOW; brevebelowcmb
16035 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
16036 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
16037 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
16038 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16039 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
16040 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
16041 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
16042 % U+20DD COMBINING ENCLOSING CIRCLE
16043 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16044 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
16045 \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.
16046 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
16047 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
16048 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%

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16049 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
16050 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
16051 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
16052 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
16053 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
16054 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16055 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16056 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16057 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
16058 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16059 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16060 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16061 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16062 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
16063 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
16064 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16065 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
16066 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16067 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16068 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16069 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16070 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16071 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16072 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16073 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16074 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16075 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16076 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16077 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16078 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16079 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16080 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16081 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16082 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16083 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16084 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16085 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16086 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16087 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16088 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16089 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16090 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
low}%
16091 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16092 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16093 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16094 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16095 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16096 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16097 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16098 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16099 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
16100 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16101 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16102 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16103 \DeclareTextCommand{\capitalacute}{PU}[1]{\^{#1}}%

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16104 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16105 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16106 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16107 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16108 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16109 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16110 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16111 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16112 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16113 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16114 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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

Special white space escape characters.

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16115 % U+0009 (CHARACTER TABULATION)
16116 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16117 % U+000A (LINE FEED)
16118 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16119 % U+000D (CARRIAGE RETURN)
16120 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16121 % U+0022 QUOTATION MARK; quotedbl
16122 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16123 % U+0023 NUMBER SIGN; numbersign
16124 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16125 % U+0024 DOLLAR SIGN; dollar
16126 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16127 %* \textdollar -> \mathdollar
16128 %* \textdollar -> \EyesDollar (marvosym)
16129 % U+0025 PERCENT SIGN; percent
16130 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16131 % U+0026 AMPERSAND; ampersand
16132 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16133 %* \textampersand -> \binampersand (stmaryrd)
16134 %* \textampersand -> \with (cmll)
16135 % U+0027 APOSTROPHE; quotesingle
16136 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16137 % U+0028 LEFT PARENTHESIS; parenleft
16138 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16139 % U+0029 RIGHT PARENTHESIS; parenright
16140 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16141 % U+002A ASTERISK; asterisk; (?)
16142 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16143 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16144 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16145 % U+002C COMMA; comma; \MVComma (marvosym)
16146 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16147 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16148 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16149 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16150 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16151 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16152 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16153 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16154 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16155 % U+0031 DIGIT ONE; one; \MVOne (marvosym)

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16156 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 16157 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 16158 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 16159 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 16160 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 16161 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 16162 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
 16163 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 16164 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
 16165 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 16166 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 16167 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 16168 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 16169 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 16170 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 16171 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 16172 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 16173 % U+003C LESS-THAN SIGN; less
 16174 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 16175 % U+003E GREATER-THAN SIGN; greater
 16176 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 16177 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 16178 \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
 16179 % U+005C REVERSE SOLIDUS; backslash
 16180 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 16181 % U+005E CIRCUMFLEX ACCENT; asciicircum
 16182 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 16183 % U+005F LOW LINE; underscore
 16184 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 16185 %* \textunderscore -> \mathunderscore (LaTeX)
 16186 % U+0060 GRAVE ACCENT; grave
 16187 \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
 16188 % U+0069 LATIN SMALL LETTER I; i
 16189 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
 16190 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 16191 % U+007B LEFT CURLY BRACKET; braceleft
 16192 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B

16193 % U+007C VERTICAL LINE; *bar, verticalbar
 16194 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 16195 %* \textbar -> \textverline (tipa)
 16196 % U+007D RIGHT CURLY BRACKET; braceright
 16197 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 16198 % U+007E TILDE; asciitilde
 16199 \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
 16200 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16201 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 16202 % U+00A2 CENT SIGN; cent
 16203 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 16204 % U+00A3 POUND SIGN; sterling
 16205 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 16206 %* \textsterling -> \mathsterling (LaTeX)
 16207 %* \textsterling -> \pounds (LaTeX)
 16208 % U+00A4 CURRENCY SIGN; currency
 16209 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 16210 % U+00A5 YEN SIGN; yen
 16211 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 16212 % U+00A6 BROKEN BAR; brokenbar
 16213 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 16214 %* \textbrokenbar -> \brokenvert (wasysym)
 16215 % U+00A7 SECTION SIGN; section
 16216 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 16217 %* \textsection -> \mathsection (LaTeX)
 16218 %* \textsection -> \S (LaTeX)
 16219 % U+00A8 DIAERESIS; dieresis
 16220 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 16221 % U+00A9 COPYRIGHT SIGN; copyright
 16222 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 16223 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16224 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 16225 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16226 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 16227 % U+00AC NOT SIGN; logicalnot
 16228 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 16229 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16230 % U+00AE REGISTERED SIGN; registered
 16231 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 16232 % U+00AF MACRON; *macron, overscore
 16233 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 16234 % U+00B0 DEGREE SIGN; degree
 16235 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 16236 % U+00B1 PLUS-MINUS SIGN; plusminus
 16237 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 16238 % U+00B2 SUPERSCRIPT TWO; twosuperior
 16239 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 16240 % U+00B3 SUPERSCRIPT THREE; threesuperior
 16241 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 16242 % U+00B4 ACUTE ACCENT; acute
 16243 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4

16244 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
 16245 % U+00B5 MICRO SIGN; mu, mul
 16246 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 16247 % U+00B6 PILCROW SIGN; paragraph
 16248 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 16249 %* \textparagraph -> \mathparagraph (LaTeX)
 16250 % U+00B7 MIDDLE DOT; middot, *periodcentered
 16251 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 16252 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 16253 %* \textperiodcentered -> \Squaredot (marvosym)
 16254 % U+00B8 CEDILLA; cedilla
 16255 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 16256 % U+00B9 SUPERSCRIPT ONE; onesuperior
 16257 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 16258 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 16259 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 16260 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 16261 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 16262 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 16263 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 16264 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 16265 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 16266 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 16267 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 16268 % U+00BF INVERTED QUESTION MARK; questiondown
 16269 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 16270 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 16271 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 16272 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 16273 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 16274 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 16275 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 16276 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 16277 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 16278 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 16279 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 16280 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 16281 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 16282 % U+00C6 LATIN CAPITAL LETTER AE; AE
 16283 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 16284 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 16285 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 16286 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 16287 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 16288 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 16289 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 16290 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 16291 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 16292 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 16293 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 16294 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 16295 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 16296 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 16297 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 16298 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 16299 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

16300 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16301 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
16302 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16303 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16304 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16305 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
16306 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16307 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
16308 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16309 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
16310 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16311 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4
16312 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16313 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
16314 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16315 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
16316 % U+00D7 MULTIPLICATION SIGN; multiply
16317 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16318 %* \textmultiply -> \vartimes (stmaryrd)
16319 %* \textmultiply -> \MVMultiplication (marvosym)
16320 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16321 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16322 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16323 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
16324 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16325 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA
16326 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16327 \DeclareTextCompositeCommand{^}{PU}{U}{\80\333}% U+00DB
16328 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16329 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
16330 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16331 \DeclareTextCompositeCommand{'}{PU}{Y}{\80\335}% U+00DD
16332 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16333 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16334 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16335 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16336 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16337 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16338 \DeclareTextCompositeCommand{`}{PU}{a}{\80\340}% U+00E0
16339 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16340 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}% U+00E1
16341 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16342 \DeclareTextCompositeCommand{^}{PU}{a}{\80\342}% U+00E2
16343 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16344 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}% U+00E3
16345 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16346 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
16347 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16348 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16349 % U+00E6 LATIN SMALL LETTER AE; ae
16350 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16351 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16352 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16353 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16354 \DeclareTextCompositeCommand{`}{PU}{e}{\80\350}% U+00E8
16355 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16356 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}% U+00E9

16357 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16358 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16359 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16360 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16361 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16362 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16363 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16364 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16365 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16366 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16367 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16368 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16369 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16370 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16371 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16372 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16373 % U+00F0 LATIN SMALL LETTER ETH; eth
16374 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16375 %* \dh -> \eth (wsuipa, phonetic)
16376 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16377 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16378 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16379 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16380 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16381 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16382 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16383 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16384 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16385 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16386 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16387 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16388 % U+00F7 DIVISION SIGN; divide
16389 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16390 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16391 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16392 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16393 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16394 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16395 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16396 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16397 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16398 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16399 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16400 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16401 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16402 % U+00FE LATIN SMALL LETTER THORN; thorn;
16403 % \th, \thorn (wasysym), \textthorn (tipa)
16404 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16405 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16406 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16407 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16408 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16409 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16410 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron

16411 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16412 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16413 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16414 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16415 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16416 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16417 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16418 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16419 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16420 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16421 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16422 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16423 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16424 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16425 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16426 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16427 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16428 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16429 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16430 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16431 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16432 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16433 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16434 % U+010D LATIN SMALL LETTER C WITH CARON; caron
16435 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16436 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16437 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16438 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16439 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16440 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16441 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16442 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16443 % \textcrd (tipa)
16444 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16445 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16446 %* \textcrd -> \crossd (wsuipa)
16447 % An alternate glyph with the stroke through the bowl:
16448 %* \textcrd -> \textbard (tipa)
16449 %* \textcrd -> \bard (wsuipa)
16450 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16451 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16452 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16453 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16454 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16455 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16456 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16457 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16458 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16459 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16460 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16461 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16462 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16463 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16464 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16465 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16466 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron

16467 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16468 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16469 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16470 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16471 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16472 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16473 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16474 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16475 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16476 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16477 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16478 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16479 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16480 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16481 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16482 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16483 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16484 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16485 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16486 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16487 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16488 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16489 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16490 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16491 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16492 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16493 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16494 %* \texthbar -> \textcrh (tipa)
16495 %* \texthbar -> \crossh (wsuipa)
16496 %* \texthbar -> \planck (phonetic)
16497 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16498 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16499 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16500 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16501 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16502 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16503 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16504 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16505 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16506 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16507 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16508 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16509 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16510 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16511 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16512 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16513 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16514 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16515 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16516 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16517 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16518 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16519 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16520 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16521 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ

```

16522 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16523 % U+0133 LATIN SMALL LIGATURE IJ; ij
16524 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16525 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16526 \DeclareTextCompositeCommand{\~}{PU}{J}{\81\064}% U+0134
16527 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16528 \DeclareTextCompositeCommand{\~}{PU}{j}{\81\065}% U+0135
16529 \DeclareTextCompositeCommand{\~}{PU}{\j}{\81\065}% U+0135
16530 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16531 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16532 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16533 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

```

16534 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16535 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16536 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16537 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16538 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16539 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16540 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16541 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16542 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16543 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16544 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16545 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16546 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16547 \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`.

```

16548 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16549 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16550 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16551 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16552 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16553 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16554 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16555 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16556 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16557 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16558 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16559 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16560 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
16561 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16562 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16563 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16564 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16565 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16566 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16567 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

```

16568 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16569 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16570 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16571 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16572 % U+014B LATIN SMALL LETTER ENG; eng
 16573 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16574 %* \ng -> \eng (wsuipa)
 16575 %* \ng -> \engma (phonetic)
 16576 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16577 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16578 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16579 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16580 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16581 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16582 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16583 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16584 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
 cute, Ohungarumlaut
 16585 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16586 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16587 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16588 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16589 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16590 % U+0153 LATIN SMALL LIGATURE OE; oe
 16591 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16592 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16593 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16594 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16595 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16596 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16597 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16598 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16599 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16600 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16601 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16602 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16603 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16604 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16605 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16606 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16607 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16608 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16609 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16610 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16611 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16612 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16613 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16614 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16615 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16616 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16617 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16618 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16619 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16620 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-

cent

16621 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16622 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16623 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16624 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16625 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16626 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16627 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16628 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16629 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16630 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16631 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16632 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16633 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16634 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16635 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16636 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16637 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16638 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16639 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16640 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16641 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16642 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16643 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16644 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16645 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16646 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16647 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16648 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16649 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16650 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16651 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16652 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16653 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16654 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16655 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16656 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16657 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16658 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16659 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16660 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16661 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16662 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16663 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16664 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16665 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16666 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16667 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16668 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16669 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16670 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16671 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16672 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16673 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16674 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron

16675 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16676 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16677 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16678 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16679 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16680 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16681 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16682 %* \textcrb -> \crossb (wsuipa)
 16683 % An alternate glyph with the stroke through the bowl:
 16684 %* \textcrb -> \textbarb (tipa)
 16685 %* \textcrb -> \barb (wsuipa)
 16686 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16687 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
 16688 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16689 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16690 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
 16691 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
 16692 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16693 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 16694 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 16695 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 16696 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 16697 %* \textflorin -> \Florin (marvosym)
 16698 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 16699 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 16700 %* \texthvlig -> \hv (wsuipa)
 16701 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
 16702 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
 16703 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 16704 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 16705 %* \texthtk -> \hausak (phonetic)
 16706 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 16707 % \textbarl (tipa), \barl (wsuipa)
 16708 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 16709 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 16710 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 16711 % \textcrlambda (tipa)
 16712 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 16713 %* \textcrlambda -> \crossnilambda (wsuipa)
 16714 %* \textcrlambda -> \barlambda (phonetic)
 16715 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 16716 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
 16717 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
 16718 % \textnrleg (tipx)
 16719 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 16720 %* \textPUnrleg -> \textnrleg (tipx)
 16721 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 16722 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 16723 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
 16724 % \textlhookt (tipa)
 16725 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

16726 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
 16727 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
 16728 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
 16729 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
 16730 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
 16731 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
 16732 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
 16733 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
 16734 % glottalinvertedstroke; \textcrinvglotstop (tipa)
 16735 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
 16736 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
 16737 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 16738 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
 tal;
 16739 % \textpipe (tipa)
 16740 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 16741 %* \textpipe -> \textpipevar (tipx)
 16742 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 16743 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 16744 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 16745 %* \textdoublepipe -> \textdoublepipevar (tipx)
 16746 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
 BLE BAR;
 16747 % clickalveolar; \textdoublebarpipe (tipa)
 16748 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 16749 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 16750 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 16751 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 16752 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
 16753 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 16754 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 16755 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 16756 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 16757 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16758 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16759 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 16760 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 16761 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 16762 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 16763 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 16764 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 16765 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 16766 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 16767 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
 16768 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
 16769 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 16770 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 16771 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 16772 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 16773 %* \textgslash -> \textcrg (tipa)
 16774 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 16775 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 16776 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 16777 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 16778 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 16779 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 16780 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron

16781 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16782 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16783 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16784 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16785 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16786 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16787 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16788 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16789 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16790 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16791 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16792 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16793 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16794 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16795 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16796 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16797 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16798 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16799 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16800 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16801 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16802 % *Oslashacute, Ostrokeacut
16803 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16804 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16805 % *oslashacute, ostrokeacut
16806 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16807 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16808 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16809 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16810 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16811 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16812 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16813 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16814 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16815 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16816 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16817 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16818 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16819 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16820 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16821 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16822 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16823 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16824 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16825 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16826 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16827 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16828 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16829 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16830 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16831 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16832 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16833 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-

edbreve
 16834 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
 16835 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
 breve
 16836 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
 16837 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 16838 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 16839 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 16840 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16841 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16842 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16843 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16844 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16845 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16846 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16847 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16848 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16849 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16850 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16851 % U+021F LATIN SMALL LETTER H WITH CARON
 16852 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16853 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16854 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16855 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16856 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16857 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16858 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16859 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16860 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16861 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16862 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16863 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16864 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16865 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16866 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16867 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16868 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16869 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16870 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16871 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16872 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16873 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16874 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16875 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16876 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16877 % U+0237 LATIN SMALL LETTER DOTLESS J
 16878 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16879 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16880 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16881 %* \textPUdblig -> \textdblig (tipx)
 16882 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16883 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16884 %* \textPUqplig -> \textqplig (tipx)
 16885 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16886 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C

16887 %* \textslashc -> \textcentoldstyle (textcomp)
 16888 % With bar instead of stroke:
 16889 %* \textslashc -> \textbarc (tipa)

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

16890 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16891 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16892 %* \textturna -> \inva (wasysym)
 16893 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16894 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16895 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16896 %* \textscripta -> \vara (phonetic)
 16897 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16898 % \textturnscripta (tipa)
 16899 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16900 %* \textturnscripta -> \invscripta (wsuipa)
 16901 %* \textturnscripta -> \rotvara (phonetic)
 16902 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16903 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16904 %* \texthtb -> \hookb (wsuipa)
 16905 %* \texthtb -> \hausab (phonetic)
 16906 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16907 % \textopeno (tipa), \openo (wasysym)
 16908 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16909 %* \textopeno -> \varopeno (phonetic)
 16910 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16911 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16912 %* \textctc -> \curlyc (wsuipa)
 16913 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16914 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16915 %* \textrtaild -> \taild (wsuipa)
 16916 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16917 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16918 %* \texthtd -> \hookd (wsuipa)
 16919 %* \texthtd -> \hausad (phonetic)
 16920 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16921 % \textreve (tipa), \reve (wsuipa)
 16922 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16923 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16924 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16925 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16926 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16927 % \textrhookschwa (tipa)
 16928 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16929 %* \textrhookschwa -> \er (wsuipa)
 16930 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 16931 % SILON; eopen;
 16931 % \niepsilon (wsuipa)
 16932 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16933 %* \textniepsilon -> \epsi (phonetic)
 16934 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16935 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16936 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16937 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 16938 % reversedhook;
 16938 % \textrhookrevepsilon (tipa)
 16939 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D

16940 %* \textrhookreversesilon -> \hookreversesilon (wsuipa)
 16941 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenreversesilon;
 16942 % \textclosereversesilon (tipa)
 16943 \DeclareTextCommand{\textclosereversesilon}{PU}{\82\136}% U+025E
 16944 %* \textclosereversesilon -> \closedreversesilon (wsuipa)
 16945 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdotlessstroke;
 16946 % \textbardotlessj (tipa)
 16947 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16948 %* \textbardotlessj -> \barj (phonetic)
 16949 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16950 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16951 %* \texthtg -> \hookg (wsuipa)
 16952 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16953 % \textscriptg (tipa), \scriptg (wsuipa)
 16954 \DeclareTextCommand{\textscriptg}{PU}{\82\141}% U+0261
 16955 %* \textscriptg -> \varg (phonetic)
 16956 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16957 \DeclareTextCommand{\textscg}{PU}{\82\142}% U+0262
 16958 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16959 % \ipagamma (wsuipa), \vod (phonetic)
 16960 \DeclareTextCommand{\textipagamma}{PU}{\82\143}% U+0263
 16961 %* \textipagamma -> \vod (phonetic)
 16962 % U+0264 LATIN LETTER RAMS HORN; ramshorn;
 16963 % \babygamma (wsuipa)
 16964 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}% U+0264
 16965 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16966 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16967 %* \textturnh -> \invh (wsuipa)
 16968 %* \textturnh -> \udesc (phonetic)
 16969 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16970 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16971 %* \texthth -> \hookh (wsuipa)
 16972 %* \texthth -> \voicedh (phonetic)
 16973 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
 16974 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16975 %* \texththeng -> \hookheng (wsuipa)
 16976 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16977 % \textbari (tipa), \bari (wsuipa)
 16978 \DeclareTextCommand{\textbari}{PU}{\82\150}% U+0268
 16979 %* \textbari -> \ibar (phonetic)
 16980 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16981 \DeclareTextCommand{\textniiota}{PU}{\82\151}% U+0269
 16982 %* \textniiota -> \vari (phonetic)
 16983 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16984 \DeclareTextCommand{\textsci}{PU}{\82\152}% U+026A
 16985 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16986 % \textltilde (tipa)
 16987 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16988 %* \textltilde -> \tildel (wsuipa)
 16989 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16990 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16991 %* \textbeltl -> \latfrc (wsuipa)
 16992 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16993 % \hookretroflex; \textrtail (tipa)

16994 \DeclareTextCommand{\textrtail}{PU}{\82\155}% U+026D
16995 %* \textrtail -> \tail (wsuipa)
16996 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16997 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16998 %* \textlyoghlig -> \lz (wsuipa)
16999 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
17000 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
17001 %* \textturnm -> \invm (wsuipa)
17002 %* \textturnm -> \rotrm (phonetic)
17003 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
17004 % \textturnmrleg (tipa)
17005 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
17006 %* \textturnmrleg -> \legm (wsuipa)
17007 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
17008 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
17009 %* \textltailm -> \labdentalnas (wsuipa)
17010 %* \textltailm -> \emgma (phonetic)
17011 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
17012 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
17013 %* \textltailn -> \nj (wsuipa)
17014 %* \textltailn -> \enya (phonetic)
17015 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
17016 % nhookretroflex; \textrtailn (tipa)
17017 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17018 %* \textrtailn -> \tailn (wsuipa)
17019 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17020 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
17021 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17022 % LATIN CAPITAL LETTER BARRED O; obarred;
17023 % \textbaro (tipa), \baro (wsuipa)
17024 % But \baro from stmaryrd is different!
17025 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17026 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscœlig (tipa)
17027 \DeclareTextCommand{\textscœlig}{PU}{\82\166}% U+0276
17028 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatincloded;
17029 % \textcloseomega (tipa)
17030 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17031 %* \textcloseomega -> \closedniomega (wsuipa)
17032 %* \textcloseomega -> \varomega (phonetic)
17033 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
17034 \DeclareTextCommand{\textniph}{PU}{\82\170}% U+0278
17035 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17036 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17037 %* \textturnr -> \invr (wsuipa)
17038 %* \textturnr -> \rotr (phonetic)
17039 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17040 % rlonglegturned; \textturnlongleg (tipa)
17041 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17042 %* \textturnlongleg -> \invleg (wsuipa)
17043 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
17044 % \textturnrrtail (tipa)
17045 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17046 %* \textturnrrtail -> \tailinvr (wsuipa)
17047 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)

17048 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17049 %* \textlonglegr -> \legr (wsuipa)
17050 % U+027D LATIN SMALL LETTER R WITH TAIL; rho; \textrtailr (tipa)
17051 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17052 %* \textrtailr -> \tailr (wsuipa)
17053 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17054 % \textfishhookr (tipa)
17055 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17056 %* \textfishhookr -> \flapr (wsuipa)
17057 %* \textfishhookr -> \flap (phonetic)
17058 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17059 % \textlhtlongi (tipa)
17060 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17061 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17062 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17063 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17064 % \textinvscr (tipa), \invscr (wsuipa)
17065 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17066 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17067 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17068 %* \textrtails -> \tails (wsuipa)
17069 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17070 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17071 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17072 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17073 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17074 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
17075 % \textvibyi (tipa)
17076 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17077 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17078 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17079 %* \textctesh -> \curlyesh (wsuipa)
17080 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17081 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17082 %* \textturnt -> \clickt (wsuipa)
17083 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
17084 % \textrtailt (tipa)
17085 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17086 %* \textrtailt -> \tailt (wsuipa)
17087 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17088 % \textbaru (tipa), \baru (wsuipa)
17089 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17090 %* \textbaru -> \ubar (phonetic)
17091 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17092 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17093 %* \textniupsilon -> \rotOmega (phonetic)
17094 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17095 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17096 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17097 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17098 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17099 %* \textturnv -> \invv (wsuipa)
17100 %* \textturnv -> \pwedge (phonetic)

17101 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17102 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17103 %* \textturnw -> \invw (wsuipa)
17104 %* \textturnw -> \rotw (phonetic)
17105 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17106 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17107 %* \textturny -> \invy (wsuipa)
17108 %* \textturny -> \roty (phonetic)
17109 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17110 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17111 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
17112 % \textrtailz (tipa)
17113 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17114 %* \textrtailz -> \tailz (wsuipa)
17115 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17116 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17117 %* \textctz -> \curlyz (wsuipa)
17118 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17119 % \textyogh (tipa), \yogh (wsuipa)
17120 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17121 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17122 % ezhcurl; \textctyogh (tipa)
17123 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17124 %* \textctyogh -> \curlyyogh (wsuipa)
17125 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17126 % \textglotstop (tipa), \glotstop (wsuipa)
17127 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17128 %* \textglotstop -> \ejective (wsuipa)
17129 %* \textglotstop -> \glottal (phonetic)
17130 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17131 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17132 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17133 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17134 %* \textrevglotstop -> \reject (wsuipa)
17135 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17136 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17137 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17138 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17139 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17140 %* \textstretchc -> \clickc (wsuipa)
17141 %* \textstretchc -> \textstretchcvar (tipx)
17142 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17143 % \textbullseye (tipa)
17144 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17145 %* \textbullseye -> \clickb (wsuipa)
17146 %* \textbullseye -> \textObullseye (tipx)
17147 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17148 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17149 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17150 % \textcloseepsilon (tipa)
17151 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17152 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17153 % \texthtscg (tipa)
17154 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17155 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)

17156 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 17157 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
 tail; \textcdj (tipa)
 17158 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 17159 %* \textctj -> \textctjvar (tipx)
 17160 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 17161 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 17162 %* \textturnk -> \textturnsck (tipx)
 17163 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 17164 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
 17165 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 17166 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 17167 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 17168 % \textbarglotstop (tipa)
 17169 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 17170 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 17171 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 17172 % \textbarrevglotstop (tipa)
 17173 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17174 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17175 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17176 %* \textdzlig -> \dz (wsupipa)
 17177 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 17178 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17179 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17180 % \textdctzlig (tipa)
 17181 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17182 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17183 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17184 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 17185 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 17186 %* \texttshlig -> \tesh (wsuipa)
 17187 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17188 % \texttctclig (tipa)
 17189 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17190 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17191 % \textlhtlongy (tipa)
 17192 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17193 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17194 % \textvibyy (tipa)
 17195 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

17196 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17197 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17198 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17199 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17200 % \textraiseglotstop (tipa)
 17201 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17202 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17203 % \textlptr (tipa)
 17204 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17205 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17206 % \textrptr (tipa)

17207 \DeclareTextCommand{\texttrptr}{PU}{\82\303}% U+02C3
 17208 % U+02C7 CARON; caron
 17209 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17210 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17211 % \textprimstress (tipa)
 17212 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17213 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17214 % \textsecstress (tipa)
 17215 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17216 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17217 % \textlengthmark (tipa)
 17218 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17219 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 17220 % \texthalflength (tipa)
 17221 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17222 % U+02D8 BREVE; breve
 17223 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17224 % U+02D9 DOT ABOVE; dotaccent
 17225 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17226 % U+02DA RING ABOVE; ring
 17227 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17228 % U+02DB OGONEK; ogonek
 17229 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17230 % U+02DC SMALL TILDE; ilde, *tilde
 17231 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17232 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17233 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17234 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17235 % U+02F3 MODIFIER LETTER LOW RING
 17236 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17237 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17238 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17239 % U+02F7 MODIFIER LETTER LOW TILDE
 17240 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17241 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17242 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17243 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17244 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

17245 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17246 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17247 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17248 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17249 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 17250 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17251 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17252 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17253 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 17254 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

17255 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17256 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17257 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek

17258 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
17259 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
17260 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
17261 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
17262 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
17263 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
17264 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
17265 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
17266 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
17267 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
17268 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17269 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
17270 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17271 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17272 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17273 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17274 % iotadieresis
17275 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
17276 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17277 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17278 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17279 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17280 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17281 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17282 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
17283 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17284 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17285 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17286 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17287 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17288 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17289 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17290 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17291 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17292 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17293 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17294 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17295 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17296 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17297 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17298 % U+039C GREEK CAPITAL LETTER MU; Mu
17299 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17300 % U+039D GREEK CAPITAL LETTER NU; Nu
17301 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17302 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17303 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17304 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17305 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17306 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17307 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17308 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17309 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17310 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17311 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17312 % U+03A4 GREEK CAPITAL LETTER TAU; Tau

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17313 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17314 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon (LaTeX)
17315 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17316 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17317 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17318 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17319 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17320 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17321 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17322 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17323 % \Omega (LaTeX)
17324 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17325 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17326 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17327 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17328 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
17329 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17330 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17331 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17332 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17333 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17334 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17335 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17336 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17337 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17338 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17339 % AND TONOS; upsilondieresis
17340 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17341 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17342 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17343 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17344 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17345 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17346 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17347 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17348 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17349 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17350 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17351 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17352 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17353 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17354 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17355 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17356 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17357 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17358 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17359 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17360 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17361 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17362 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17363 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17364 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17365 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17366 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17367 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17368 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE

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17369 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17370 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17371 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17372 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17373 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17374 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17375 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17376 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17377 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17378 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17379 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17380 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17381 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17382 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17383 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17384 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17385 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17386 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17387 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17388 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17389 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17390 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17391 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17392 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17393 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
17394 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17395 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17396 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17397 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17398 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17399 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17400 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17401 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17402 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
17403 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
17404 % U+03DB GREEK SMALL LETTER STIGMA
17405 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
17406 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17407 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17408 % U+03DD GREEK SMALL LETTER DIGAMMA
17409 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17410 %* \textdigammagreek -> \digamma (AmS)
17411 % U+03DE GREEK LETTER KOPPA; Koppagreek
17412 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17413 % U+03DF GREEK SMALL LETTER KOPPA
17414 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17415 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17416 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17417 % U+03E1 GREEK SMALL LETTER SAMPI
17418 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17419 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17420 % \backepsilon (AmS)
17421 \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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17422 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17423 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17424 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17425 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17426 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17427 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17428 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17429 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17430 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17431 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
17432 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17433 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17434 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17435 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17436 % Icyrrilic, *afii10055
17437 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17438 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
17439 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17440 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17441 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17442 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17443 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17444 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17445 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17446 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17447 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17448 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17449 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17450 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17451 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17452 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17453 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
17454 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17455 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17456 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17457 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17458 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17459 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17460 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17461 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17462 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17463 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17464 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17465 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17466 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17467 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17468 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17469 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17470 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17471 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17472 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17473 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17474 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrilic, *afii10026
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17475 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17476 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17477 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17478 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17479 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17480 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17481 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17482 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17483 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17484 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17485 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17486 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17487 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17488 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17489 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17490 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17491 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17492 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17493 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17494 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17495 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17496 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17497 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17498 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17499 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17500 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17501 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17502 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17503 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17504 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17505 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17506 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17507 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17508 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17509 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17510 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17511 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17512 % Hardsigncyrillic, *afii10044
17513 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17514 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17515 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17516 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17517 % Softsigncyrillic, *afii10046
17518 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17519 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17520 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17521 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17522 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17523 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17524 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17525 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17526 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17527 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17528 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17529 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17530 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17531 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic

17532 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17533 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17534 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
17535 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17536 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17537 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17538 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17539 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17540 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17541 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17542 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17543 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17544 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17545 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17546 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17547 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17548 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17549 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
17550 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17551 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
17552 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17553 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
17554 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17555 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
17556 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17557 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17558 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17559 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
17560 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17561 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
17562 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17563 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
17564 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17565 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
17566 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17567 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
17568 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17569 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
17570 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17571 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446
17572 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17573 \DeclareTextCommand{\cyr ch}{PU}{\84\107}% U+0447
17574 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17575 \DeclareTextCommand{\cyr sh}{PU}{\84\110}% U+0448
17576 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17577 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17578 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17579 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17580 %* \cyrhrdsn -> \hardsign (tipa)
17581 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17582 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
17583 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17584 \DeclareTextCommand{\cyr sftsn}{PU}{\84\114}% U+044C
17585 %* \cyr sftsn -> \softsign (tipa)
17586 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17587 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D

17588 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17589 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17590 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17591 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17592 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17593 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17594 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17595 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17596 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17597 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17598 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17599 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17600 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17601 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17602 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17603 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17604 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17605 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17606 % *afii10103, icyrillic
17607 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17608 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17609 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17610 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17611 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17612 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17613 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17614 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17615 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17616 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17617 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17618 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17619 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17620 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17621 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17622 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17623 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17624 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17625 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17626 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17627 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17628 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17629 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17630 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17631 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17632 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17633 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17634 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17635 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17636 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17637 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17638 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17639 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17640 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17641 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17642 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17643 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467

17644 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17645 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17646 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17647 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17648 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17649 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17650 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17651 \DeclareTextCommand{\cyrbysus}{PU}{\84\153}% U+046B
17652 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17653 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17654 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17655 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17656 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17657 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17658 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17659 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17660 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17661 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17662 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17663 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17664 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17665 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17666 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17667 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17668 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17669 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17670 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17671 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17672 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; Izhitsadblgravecyrillic
17673 % GRAVE ACCENT; Izhitsadblgravecyrillic
17674 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17675 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; izhitsadblgravecyrillic
17676 % GRAVE ACCENT; izhitsadblgravecyrillic
17677 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17678 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17679 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17680 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17681 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17682 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
17683 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17684 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17685 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17686 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
locyrillic
17687 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17688 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
cyrillic
17689 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17690 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17691 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17692 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17693 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F

17694 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17695 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17696 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17697 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17698 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17699 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
 cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
 matacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
 acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17700 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17701 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17702 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17703 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17704 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17705 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17706 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17707 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17708 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17709 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17710 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17711 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17712 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17713 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17714 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17715 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17716 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17717 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17718 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17719 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17720 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17721 % Ghemiddlehookcyrillic
 17722 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17723 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17724 % ghemiddlehookcyrillic
 17725 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17726 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17727 % Zhedescendercyrillic
 17728 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17729 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17730 % zhedescendercyrillic
 17731 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17732 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17733 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17734 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17735 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-

cyrillic

17736 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499

17737 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

17738 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

17739 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

17740 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic

17741 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

17742 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;

17743 % Kavertikalstrokecyrillic

17744 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C

17745 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17746 % kavertikalstrokecyrillic

17747 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17748 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic

17749 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E

17750 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

17751 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

17752 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic

17753 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0

17754 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic

17755 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17756 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

17757 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2

17758 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic

17759 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3

17760 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic

17761 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4

17762 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic

17763 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5

17764 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic

17765 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6

17766 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic

17767 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

17768 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic

17769 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8

17770 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

17771 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9

17772 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic

17773 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA

17774 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17775 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic

17776 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

17777 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB

17778 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17779 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17780 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17781 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
17782 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17783 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17784 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17785 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17786 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
17787 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17788 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
17789 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17790 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
17791 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17792 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17793 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17794 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17795 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17796 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17797 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17798 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17799 % Chedescendercyrillic
17800 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17801 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17802 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17803 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17804 % Cheverticalstrokecyrillic
17805 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17806 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17807 % cheverticalstrokecyrillic
17808 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17809 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17810 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17811 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17812 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17813 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17814 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17815 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17816 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17817 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17818 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17819 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17820 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17821 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17822 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17823 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17824 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17825 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17826 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17827 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17828 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

17829 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17830 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17831 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17832 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17833 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17834 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17835 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17836 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 17837 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17838 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17839 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17840 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17841 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17842 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17843 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17844 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17845 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17846 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17847 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17848 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17849 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17850 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17851 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17852 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17853 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 17854 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17855 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17856 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17857 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17858 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17859 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17860 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17861 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17862 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17863 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17864 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17865 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17866 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17867 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17868 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17869 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17870 % Schwadiescyrillic
 17871 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17872 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17873 % schwadiescyrillic
 17874 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17875 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17876 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17877 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
 cyrillic
 17878 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17879 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-

cyrillic

17880 \DeclareTextCompositeCommand{\}{PU}{\CYRZ}{\84\336}% U+04DE

17881 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

17882 \DeclareTextCompositeCommand{\}{PU}{\cyrz}{\84\337}% U+04DF

17883 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic

17884 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0

17885 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic

17886 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

17887 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17888 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2

17889 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17890 \DeclareTextCompositeCommand{=}{PU}{\cyrI}{\84\343}% U+04E3

17891 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

17892 \DeclareTextCompositeCommand{\}{PU}{\CYRI}{\84\344}% U+04E4

17893 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

17894 \DeclareTextCompositeCommand{\}{PU}{\cyrI}{\84\345}% U+04E5

17895 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

17896 \DeclareTextCompositeCommand{\}{PU}{\CYRO}{\84\346}% U+04E6

17897 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17898 \DeclareTextCompositeCommand{\}{PU}{\cyro}{\84\347}% U+04E7

17899 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

17900 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17901 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17902 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

17903 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

17904 % Obarreddieresiscyrillic

17905 \DeclareTextCompositeCommand{\}{PU}{\CYROTLD}{\84\352}% U+04EA

17906 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

17907 % obarreddieresiscyrillic

17908 \DeclareTextCompositeCommand{\}{PU}{\cyrotld}{\84\353}% U+04EB

17909 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

17910 \DeclareTextCompositeCommand{\}{PU}{\CYREREV}{\84\354}% U+04EC

17911 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

17912 \DeclareTextCompositeCommand{\}{PU}{\cyreref}{\84\355}% U+04ED

17913 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

17914 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE

17915 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

17916 \DeclareTextCompositeCommand{=}{PU}{\cyrU}{\84\357}% U+04EF

17917 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

17918 \DeclareTextCompositeCommand{\}{PU}{\CYRU}{\84\360}% U+04F0

17919 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

17920 \DeclareTextCompositeCommand{\}{PU}{\cyru}{\84\361}% U+04F1

17921 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17922 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

17923 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

17924 \DeclareTextCompositeCommand{\H}{PU}{\cyrU}{\84\363}% U+04F3

17925 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

17926 \DeclareTextCompositeCommand{\}{PU}{\CYRCH}{\84\364}% U+04F4

17927 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

cyrillic

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17928 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17929 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17930 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17931 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17932 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17933 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17934 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17935 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17936 \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
17937 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17938 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17939 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17940 \DeclareTextCommand{\cyrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

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51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

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17941 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17942 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17943 % U+05D0 HEBREW LETTER ALEF
17944 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17945 % U+05D1 HEBREW LETTER BET
17946 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17947 % U+05D2 HEBREW LETTER GIMEL
17948 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17949 % U+05D3 HEBREW LETTER DALET
17950 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17951 % U+05D4 HEBREW LETTER HE
17952 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17953 % U+05D5 HEBREW LETTER VAV
17954 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17955 % U+05D6 HEBREW LETTER ZAYIN
17956 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17957 % U+05D7 HEBREW LETTER HET
17958 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
17959 % U+05D8 HEBREW LETTER TET
17960 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17961 % U+05D9 HEBREW LETTER YOD
17962 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17963 % U+05DA HEBREW LETTER FINAL KAF
17964 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17965 % U+05DB HEBREW LETTER KAF
17966 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17967 % U+05DC HEBREW LETTER LAMED
17968 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17969 % U+05DD HEBREW LETTER FINAL MEM
17970 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

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17971 % U+05DE HEBREW LETTER MEM
 17972 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17973 % U+05DF HEBREW LETTER FINAL NUN
 17974 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17975 % U+05E0 HEBREW LETTER NUN
 17976 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17977 % U+05E1 HEBREW LETTER SAMEKH
 17978 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17979 % U+05E2 HEBREW LETTER AYIN
 17980 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17981 % U+05E3 HEBREW LETTER FINAL PE
 17982 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17983 % U+05E4 HEBREW LETTER PE
 17984 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17985 % U+05E5 HEBREW LETTER FINAL TSADI
 17986 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17987 % U+05E6 HEBREW LETTER TSADI
 17988 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17989 % U+05E7 HEBREW LETTER QOF
 17990 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17991 % U+05E8 HEBREW LETTER RESH
 17992 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17993 % U+05E9 HEBREW LETTER SHIN
 17994 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17995 %* \hebshin -> \hebsin (he8)
 17996 % U+05EA HEBREW LETTER TAV
 17997 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17998 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17999 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 18000 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 18001 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 18002 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 18003 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

18004 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 18005 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

18006 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsc (tipa)
 18007 \DeclareTextCommand{\textsc}{PU}{\9035\000}% U+1D00
 18008 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18009 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 18010 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 18011 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 18012 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 18013 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 18014 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textस्क (tipx)
 18015 \DeclareTextCommand{\textPUस्क}{PU}{\9035\013}% U+1D0B
 18016 %* \textPUस्क -> \textस्क (tipx)
 18017 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 18018 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 18019 %* \textPUscm -> \textscm (tipx)
 18020 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 18021 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 18022 %* \textPUscp -> \textscp (tipx)

18023 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18024 \DeclareTextCommand{\textPurevscr}{PU}{\9035\031}% U+1D19
 18025 %* \textPurevscr -> \textrevscr (tipx)
 18026 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 18027 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 18028 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18029 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 18030 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18031 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 18032 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18033 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 18034 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18035 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 18036 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18037 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 18038 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18039 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 18040 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18041 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18042 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18043 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18044 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18045 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18046 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18047 % \barsci (wsuipa)
 18048 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18049 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18050 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18051 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18052 % \barscu (wsuipa)
 18053 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18054 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18055 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18056 %* \textPURhooka -> \textrhooka (tipx)
 18057 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18058 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18059 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18060 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18061 %* \textPURhooke -> \textrhooke (tipx)
 18062 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18063 % \textrhookepsilon (tipx)
 18064 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18065 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18066 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18067 % \textrhookopeno (tipx)
 18068 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18069 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18070 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18071 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18072 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow

18073 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18074 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18075 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
18076 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18077 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
18078 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18079 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18080 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18081 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18082 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18083 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18084 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18085 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18086 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18087 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
18088 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18089 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18090 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18091 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18092 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18093 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18094 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18095 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18096 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18097 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18098 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18099 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18100 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18101 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18102 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18103 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18104 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18105 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18106 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18107 % Emacrongrave
18108 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18109 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18110 % emacrongrave
18111 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18112 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18113 % Emacronacute
18114 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18115 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18116 % emacronacute
18117 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18118 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18119 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18120 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18121 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18122 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18123 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18124 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18125 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B

18126 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18127 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18128 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18129 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18130 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18131 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
18132 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18133 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
18134 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18135 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18136 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18137 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18138 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18139 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18140 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18141 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18142 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18143 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
18144 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18145 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
18146 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18147 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18148 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18149 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18150 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18151 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18152 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18153 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18154 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18155 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18156 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18157 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18158 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18159 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18160 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18161 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18162 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18163 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18164 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18165 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18166 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18167 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18168 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18169 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18170 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18171 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18172 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18173 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18174 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18175 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18176 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18177 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18178 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18179 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18180 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow

18181 \DeclareTextCompositeCommand{\textsubcircum}{PU}{1}{\9036\075}% U+1E3D
 18182 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 18183 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
 18184 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 18185 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
 18186 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 18187 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 18188 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 18189 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 18190 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 18191 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
 18192 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 18193 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
 18194 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18195 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 18196 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18197 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18198 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18199 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18200 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18201 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18202 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18203 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18204 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18205 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18206 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18207 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18208 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18209 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18210 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18211 % Omacrongrave
 18212 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18213 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18214 % omacrongrave
 18215 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18216 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18217 % Omacronacute
 18218 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18219 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18220 % omacronacute
 18221 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18222 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18223 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18224 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18225 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18226 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18227 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18228 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18229 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18230 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18231 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18232 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18233 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18234 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18235 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A

18236 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18237 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18238 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18239 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18240 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18241 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18242 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18243 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18244 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18245 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18246 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18247 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18248 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18249 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18250 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18251 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18252 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18253 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18254 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18255 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18256 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18257 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18258 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18259 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18260 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18261 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18262 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18263 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18264 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18265 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18266 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18267 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18268 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18269 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18270 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18271 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18272 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18273 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18274 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18275 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18276 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18277 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18278 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18279 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18280 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18281 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18282 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18283 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18284 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18285 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18286 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave

18287 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18288 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18289 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18290 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18291 \DeclareTextCompositeCommand{\' }{PU}{W}{\9036\202}% U+1E82
18292 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18293 \DeclareTextCompositeCommand{\' }{PU}{w}{\9036\203}% U+1E83
18294 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18295 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18296 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18297 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18298 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18299 \DeclareTextCompositeCommand{\. }{PU}{W}{\9036\206}% U+1E86
18300 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18301 \DeclareTextCompositeCommand{\. }{PU}{w}{\9036\207}% U+1E87
18302 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18303 \DeclareTextCompositeCommand{\d }{PU}{W}{\9036\210}% U+1E88
18304 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18305 \DeclareTextCompositeCommand{\d }{PU}{w}{\9036\211}% U+1E89
18306 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18307 \DeclareTextCompositeCommand{\. }{PU}{X}{\9036\212}% U+1E8A
18308 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18309 \DeclareTextCompositeCommand{\. }{PU}{x}{\9036\213}% U+1E8B
18310 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18311 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18312 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18313 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18314 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18315 \DeclareTextCompositeCommand{\. }{PU}{Y}{\9036\216}% U+1E8E
18316 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18317 \DeclareTextCompositeCommand{\. }{PU}{y}{\9036\217}% U+1E8F
18318 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18319 \DeclareTextCompositeCommand{\` }{PU}{Z}{\9036\220}% U+1E90
18320 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18321 \DeclareTextCompositeCommand{\` }{PU}{z}{\9036\221}% U+1E91
18322 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18323 \DeclareTextCompositeCommand{\d }{PU}{Z}{\9036\222}% U+1E92
18324 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18325 \DeclareTextCompositeCommand{\d }{PU}{z}{\9036\223}% U+1E93
18326 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18327 \DeclareTextCompositeCommand{\b }{PU}{Z}{\9036\224}% U+1E94
18328 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18329 \DeclareTextCompositeCommand{\b }{PU}{z}{\9036\225}% U+1E95
18330 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18331 \DeclareTextCompositeCommand{\b }{PU}{h}{\9036\226}% U+1E96
18332 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18333 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18334 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18335 \DeclareTextCompositeCommand{\r }{PU}{w}{\9036\230}% U+1E98
18336 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18337 \DeclareTextCompositeCommand{\r }{PU}{y}{\9036\231}% U+1E99
18338 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18339 \DeclareTextCompositeCommand{\. }{PU}{\textlongs}{\9036\233}% U+1E9B
18340 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18341 \DeclareTextCompositeCommand{\d }{PU}{A}{\9036\240}% U+1EA0
18342 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow

18343 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18344 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18345 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18346 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18347 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18348 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18349 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18350 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18351 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18352 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18353 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18354 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18355 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18356 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18357 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18358 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18359 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18360 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18361 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18362 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18363 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18364 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18365 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18366 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18367 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18368 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18369 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18370 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18371 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18372 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18373 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18374 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18375 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18376 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18377 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18378 % U+2013 EN DASH; endash
 18379 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18380 % U+2014 EM DASH; emdash
 18381 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18382 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18383 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18384 %* \textbardbl -> \textdoublevertline (tipa)
 18385 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18386 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18387 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18388 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18389 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18390 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18391 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18392 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18393 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18394 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18395 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18396 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18397 % U+2020 DAGGER; dagger

18398 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18399 %* \textdagger -> \dag (LaTeX)
 18400 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18401 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18402 %* \textdaggerdbl -> \ddagger (LaTeX)
 18403 %* \textdaggerdbl -> \ddag (LaTeX)
 18404 % U+2022 BULLET; bullet
 18405 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18406 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18407 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18408 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18409 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18410 %* \textellipsis -> \mathellipsis
 18411 % U+2030 PER MILLE SIGN; perthousand
 18412 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18413 % U+2031 PER TEN THOUSAND SIGN
 18414 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18415 % U+2032 PRIME; minute; \prime (MnSymbol)
 18416 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18417 % U+2033 DOUBLE PRIME; \second (mathabx)
 18418 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18419 % U+2034 TRIPLE PRIME; \third (mathabx)
 18420 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18421 % U+2035 REVERSED PRIME; \backprime (Ams)
 18422 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18423 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 18424 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18425 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 18426 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18427 % U+203B REFERENCE MARK; referencemark
 18428 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18429 % U+203D INTERROBANG
 18430 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18431 % U+2044 FRACTION SLASH; fraction
 18432 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18433 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18434 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18435 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18436 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18437 % U+2052 COMMERCIAL MINUS SIGN
 18438 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18439 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18440 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18441 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18442 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18443 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18444 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18445 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18446 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18447 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18448 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18449 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18450 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074

18451 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18452 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18453 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18454 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18455 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18456 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18457 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18458 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18459 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18460 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18461 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18462 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18463 % U+207B SUPERSCRIPT MINUS
 18464 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18465 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18466 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18467 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18468 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18469 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18470 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18471 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18472 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18473 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18474 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18475 % U+2081 SUBSCRIPT ONE; oneinferior
 18476 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18477 % U+2082 SUBSCRIPT TWO; twoinferior
 18478 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18479 % U+2083 SUBSCRIPT THREE; threeinferior
 18480 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18481 % U+2084 SUBSCRIPT FOUR; fourinferior
 18482 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18483 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18484 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18485 % U+2086 SUBSCRIPT SIX; sixinferior
 18486 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18487 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18488 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18489 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18490 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18491 % U+2089 SUBSCRIPT NINE; nineinferior
 18492 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18493 % U+208A SUBSCRIPT PLUS SIGN
 18494 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18495 % U+208B SUBSCRIPT MINUS
 18496 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18497 % U+208C SUBSCRIPT EQUALS SIGN
 18498 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18499 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18500 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18501 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18502 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18503 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18504 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18505 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18506 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18507 % U+2092 LATIN SUBSCRIPT SMALL LETTER O

18508 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18509 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18510 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18511 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18512 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18513 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18514 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18515 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18516 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18517 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18518 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18519 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18520 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18521 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18522 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18523 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18524 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18525 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18526 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18527 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18528 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18529 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18530 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18531 % U+20A4 LIRA SIGN; afi08941, *lira
 18532 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18533 % U+20A6 NAIRA SIGN
 18534 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18535 % U+20A7 PESETA SIGN; peseta
 18536 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18537 % U+20A9 WON SIGN; won
 18538 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18539 % U+20AB DONG SIGN; dong
 18540 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18541 % U+20AC EURO SIGN; *Euro, euro
 18542 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18543 %* \texteuro -> \EurDig (marvosym)
 18544 %* \texteuro -> \EURdig (marvosym)
 18545 %* \texteuro -> \EurHv (marvosym)
 18546 %* \texteuro -> \EURhv (marvosym)
 18547 %* \texteuro -> \EurCr (marvosym)
 18548 %* \texteuro -> \EURcr (marvosym)
 18549 %* \texteuro -> \EurTm (marvosym)
 18550 %* \texteuro -> \EURtm (marvosym)
 18551 %* \texteuro -> \Eur (marvosym)
 18552 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18553 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18554 %* \textDeleatur -> \Denarius (marvosym)
 18555 % U+20B1 PESO SIGN
 18556 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18557 % U+20B2 GUARANI SIGN
 18558 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18559 % U+2103 DEGREE CELSIUS; centigrade
 18560 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103

18561 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18562 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18563 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18564 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18565 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18566 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18567 % U+2116 NUMERO SIGN; *afii61352, numero
 18568 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18569 % U+2117 SOUND RECORDING COPYRIGHT
 18570 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18571 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18572 % weierstrass; \wp (LaTeX)
 18573 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18574 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18575 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18576 % U+211E PRESCRIPTION TAKE; prescription
 18577 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18578 % U+2120 SERVICE MARK
 18579 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18580 % U+2122 TRADE MARK SIGN; trademark
 18581 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18582 % U+2126 OHM SIGN; Ohm, Omega
 18583 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18584 % U+2127 INVERTED OHM SIGN
 18585 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18586 %* \textmho -> \agemO (wasysym)
 18587 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18588 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18589 % U+212B ANGSTROM SIGN; angstrom
 18590 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18591 % U+212E ESTIMATED SYMBOL; estimated
 18592 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18593 %* \textestimated -> \EstimatedSign (marvosym)
 18594 %* \textestimated -> \Ecommerce (marvosym)
 18595 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18596 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18597 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18598 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18599 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18600 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18601 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18602 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18603 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18604 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18605 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18606 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18607 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18608 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18609 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18610 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18611 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18612 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18613 % U+2150 VULGAR FRACTION ONE SEVENTH
 18614 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150

18615 % U+2151 VULGAR FRACTION ONE NINTH
 18616 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18617 % U+2152 VULGAR FRACTION ONE TENTH
 18618 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18619 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18620 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18621 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18622 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18623 % U+2155 VULGAR FRACTION ONE FIFTH
 18624 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18625 % U+2156 VULGAR FRACTION TWO FIFTHS
 18626 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18627 % U+2157 VULGAR FRACTION THREE FIFTHS
 18628 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157
 18629 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18630 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18631 % U+2159 VULGAR FRACTION ONE SIXTH
 18632 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18633 % U+215A VULGAR FRACTION FIVE SIXTHS
 18634 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18635 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18636 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18637 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18638 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18639 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18640 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18641 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18642 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18643 % U+2184 LATIN SMALL LETTER REVERSED C
 18644 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18645 % U+2189 VULGAR FRACTION ZERO THIRDS
 18646 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18647 % U+2190 LEFTWARDS ARROW; arrowleft
 18648 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18649 % U+2191 UPWARDS ARROW; arrowup
 18650 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18651 % U+2192 RIGHTWARDS ARROW; arrowright
 18652 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18653 %* \textrightarrow -> \MVRightArrow (marvosym)
 18654 %* \textrightarrow -> \MVRightarrow (marvosym)
 18655 % U+2193 DOWNWARDS ARROW; arrowdown
 18656 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18657 %* \textdownarrow -> \MVArrowDown (marvosym)
 18658 %* \textdownarrow -> \Force (marvosym)
 18659 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18660 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18661 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18662 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18663 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18664 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18665 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18666 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18667 %* \textnearrow -> \textglobrise (tipa)
 18668 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18669 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198

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18670 %* \textsearrow -> \textglobfall (tipa)
18671 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18672 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18673 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
18674 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18675 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
18676 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18677 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18678 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18679 % \ntwoheadleftarrow (txfonts/pxfonts)
18680 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18681 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18682 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18683 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18684 % \twoheadrightarrow (AmS)
18685 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18686 % \ntwoheadrightarrow (txfonts/pxfonts)
18687 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18688 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18689 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18690 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18691 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18692 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18693 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18694 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18695 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18696 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18697 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18698 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18699 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18700 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18701 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18702 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18703 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18704 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18705 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18706 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18707 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18708 %* \textlightning -> \Lightning (marvosym)
18709 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18710 % \dls (mathabx)
18711 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18712 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18713 % \curvearrowleft (AmS)
18714 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18715 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18716 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18717 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
18718 % \leftharpoonup (LaTeX)
18719 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18720 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18721 % \leftharpoondown (LaTeX)
18722 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18723 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18724 % \upharpoonright (AmS)

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18725 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18726 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18727 % \upharpoonleft (AmS)
18728 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18729 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18730 % \rightharpoonup (LaTeX)
18731 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18732 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18733 % \rightharpoondown (LaTeX)
18734 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18735 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18736 % \downharpoonright (AmS)
18737 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18738 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18739 % \downharpoonleft (AmS)
18740 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18741 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18742 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18743 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18744 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18745 % \updownarrows (MnSymbol)
18746 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18747 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18748 % \leftrightharpoons (AmS)
18749 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\306}%* U+21C6
18750 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18751 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18752 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18753 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18754 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18755 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18756 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18757 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18758 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18759 % \leftrightharpoons (AmS);
18760 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18761 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18762 % \rightleftharpoons (LaTeX, AmS)
18763 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18764 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18765 % \nLeftarrow (AmS)
18766 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18767 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
      row (AmS)
18768 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18769 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
18770 % \nRightarrow (AmS)
18771 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18772 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18773 % \Leftarrow (LaTeX)
18774 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18775 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)

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18776 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18777 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18778 % \Rrightarrow (LaTeX)
18779 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18780 %* \textRrightarrow -> \Conclusion (marvosym)
18781 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
TeX)
18782 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18783 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18784 % \Leftrightarrow (LaTeX)
18785 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18786 %* \textLeftrightarrow -> \Equivalence (marvosym)
18787 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18788 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18789 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18790 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18791 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18792 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18793 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18794 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18795 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18796 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18797 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18798 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18799 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18800 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18801 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18802 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18803 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18804 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18805 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18806 % \dashleftarrow (AmS)
18807 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
18808 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
18809 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18810 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
18811 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightar-
row (AmS)
18812 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18813 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18814 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18815 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
18816 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18817 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18818 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18819 % \downuparrows (MnSymbol)
18820 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18821 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18822 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18823 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18824 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18825 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtrian-
gle (stmaryrd)
18826 \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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18827 % U+2200 FOR ALL; forall; \forall (LaTeX)
18828 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18829 % U+2201 COMPLEMENT; \complement (AmS)
18830 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18831 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18832 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18833 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18834 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18835 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18836 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18837 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18838 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18839 %* \textemptyset -> \varnothing (AmS)
18840 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18841 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18842 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18843 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18844 % U+2208 ELEMENT OF; element; \in (LaTeX)
18845 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18846 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18847 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18848 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18849 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18850 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18851 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18852 %* \textni -> \owns (mathabx)
18853 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18854 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18855 %* \textnotowner -> \notni (txfonts/pxfonts)
18856 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18857 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18858 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18859 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18860 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18861 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18862 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18863 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18864 % U+2212 MINUS SIGN; minus
18865 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18866 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18867 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18868 % U+2214 DOT PLUS; \dotplus (AmS)
18869 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18870 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18871 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18872 % \DividesNot (marvosym)
18873 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18874 % U+2216 SET MINUS; \setminus (LaTeX)
18875 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18876 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18877 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18878 % U+2218 RING OPERATOR; \circ (LaTeX)
18879 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18880 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18881 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18882 % U+221A SQUARE ROOT; radical

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18883 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18884 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18885 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18886 %* \textpropto -> \varprop (wasysym)
18887 % U+221E INFINITY; infinity; \infty (LaTeX)
18888 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18889 % U+2220 ANGLE; angle; \angle (LaTeX)
18890 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18891 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18892 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18893 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18894 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18895 %* \textsphericalangle -> \varangle (wasysym)
18896 %* \textsphericalangle -> \Anglesign (marvosym)
18897 %* \textsphericalangle -> \AngleSign (marvosym)
18898 % U+2223 DIVIDES; divides; \mid (LaTeX)
18899 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18900 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18901 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18902 %* \textnmid -> \notdivides (mathabx)
18903 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18904 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18905 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18906 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18907 %* \textnparallel -> nUpdownline (MnSymbol)
18908 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18909 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18910 % \owedge (stmaryrd)
18911 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18912 %* \textowedge -> \varowedge (stmaryrd)
18913 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18914 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18915 % \ovee (stmaryrd)
18916 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18917 %* \textovee -> \varovee (stmaryrd)
18918 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18919 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18920 % U+222A UNION; union; \cup (LaTeX)
18921 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18922 % U+222B INTEGRAL; integral; \int (LaTeX)
18923 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18924 %* \textint -> \varint (wasysym)
18925 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18926 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18927 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18928 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18929 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18930 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18931 %* \textoint -> \varoint (wasysym)
18932 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18933 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18934 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18935 % \ointclockwise (txfonts/pxfonts)
18936 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18937 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18938 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233

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18939 % U+2234 THEREFORE; therefore; \therefore (AmS)
18940 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18941 %* \texttherefore -> uptherefore (MnSymbol)
18942 % U+2235 BECAUSE; because; \because (AmS)
18943 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18944 %* \textbecause -> \downtherefore (MnSymbol)
18945 % U+2236 RATIO; \vdotdot (MnSymbol)
18946 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18947 % U+2237 PROPORTION; \squaredots (MnSymbol)
18948 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18949 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18950 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18951 %* \textdotminus -> \textdotdiv (mathabx)
18952 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18953 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18954 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18955 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18956 %* \textsim -> \AC (wasysym)
18957 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18958 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18959 % \nbacksim (txfonts/pxfonts)
18960 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18961 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18962 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18963 %* \textwr -> \wreath (MnSymbol)
18964 % U+2241 NOT TILDE; \nsim (AmS)
18965 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18966 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18967 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18968 % \neqsim (MnSymbol)
18969 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18970 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18971 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18972 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18973 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18974 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18975 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18976 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18977 % \ncong (AmS)
18978 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18979 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18980 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18981 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18982 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18983 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18984 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18985 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18986 % \napproxeq (txfonts/pxfonts)
18987 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18988 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18989 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18990 %* \texttriplesim -> \VHF (wasysym)
18991 % \ntriplesim (MnSymbol)
18992 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18993 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18994 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C

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18995 % \nbackcong (MnSymbol)
18996 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18997 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18998 \DeclareTextCommand{\textasym}{PU}{\9042\115}%* U+224D
18999 % \nasym (txfonts/pxfonts)
19000 \DeclareTextCommand{\textnasym}{PU}{\9042\115\83\070}%* U+224D U+0338
19001 %* \textnasym -> \notasym (mathabx)
19002 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
19003 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
19004 % \nBumpeq (txfonts/pxfonts)
19005 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
19006 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
19007 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
19008 % \nbumpeq (txfonts/pxfonts)
19009 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
19010 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
19011 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
19012 % \ndoteq (MnSymbol)
19013 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
19014 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
19015 % \doteqdot (AmS)
19016 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
19017 %* \textdoteqdot -> \Doteq (MnSymbol)
19018 % \nDoteq (MnSymbol)
19019 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
19020 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
19021 % \fallingdotseq (AmS)
19022 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
19023 % \nfallingdotseq (MnSymbol)
19024 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
19025 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
matelyequal;
19026 % \risingdotseq (AmS)
19027 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
19028 % \nrisingdoteq (MnSymbol)
19029 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
19030 % U+2254 COLON EQUALS; \colonequals (colonequals)
19031 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
19032 % U+2255 EQUALS COLON; \equalscolon (colonequals)
19033 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
19034 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
19035 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
19036 % \neqcirc (MnSymbol)
19037 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19038 % U+2257 RING EQUAL TO; \circeq (AmS)
19039 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19040 % \ncirceq (MnSymbol)
19041 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19042 % U+2259 ESTIMATES; \hateq (MnSymbol)
19043 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19044 %* \texthateq -> \corresponds (mathabx)
19045 %* \texthateq -> \Corresponds (marvosym)
19046 % \nhateq (MnSymbol)
19047 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19048 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19049 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C

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19050 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19051 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19052 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19053 %* \textneq -> \nequal (MnSymbol)
 19054 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19055 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19056 %* \textequiv -> \Congruent (marvosym)
 19057 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
 19058 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19059 %* \textnequiv -> \NotCongruent (marvosym)
 19060 %* \textnequiv -> \notequiv (mathabx)
 19061 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19062 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19063 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19064 %* \textleq -> \LessOrEqual (marvosym)
 19065 % U+2265 GREATER-THAN OR EQUAL TO; greaterorequal;
 19066 % \ge (LaTeX), \geq (LaTeX)
 19067 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 19068 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 19069 %* \textgeq -> \LargerOrEqual (marvosym)
 19070 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
 19071 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 19072 % \nleqq (txfonts/pxfonts)
 19073 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
 19074 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
 19075 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 19076 % \ngeqq (txfonts/pxfonts)
 19077 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19078 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19079 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19080 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19081 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19082 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
 19083 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19084 % \nll (txfonts/pxfonts)
 19085 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19086 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
 19087 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19088 % \ngg (txfonts/pxfonts)
 19089 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19090 % U+226C BETWEEN; \between (AmS)
 19091 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19092 % U+226E NOT LESS-THAN; notless; \nless (AmS)
 19093 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19094 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
 19095 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19096 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
 19097 % \nleq (AmS)
 19098 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19099 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
 \ngeq (AmS)
 19100 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19101 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lesssim (AmS)
 19102 \DeclareTextCommand{\textlesssim}{PU}{\9042\162}%* U+2272
 19103 %* \textlessim -> \apprle (wasysym)
 19104 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)

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19105 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19106 %* \textgtrsim -> \apprge (wasysym)
19107 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
      fonts/pxfonts)
19108 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19109 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
      fonts/pxfonts)
19110 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19111 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19112 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19113 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19114 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19115 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
      fonts/pxfonts)
19116 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19117 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
19118 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19119 % U+227A PRECEDES; precedes; \prec (LaTeX)
19120 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19121 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19122 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19123 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19124 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19125 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19126 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19127 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19128 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19129 % \nprecsim (txfonts/pxfonts)
19130 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19131 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19132 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19133 % \nsuccsim (txfonts/pxfonts)
19134 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19135 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19136 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19137 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
19138 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19139 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19140 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19141 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19142 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19143 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19144 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19145 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19146 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19147 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19148 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19149 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19150 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19151 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19152 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19153 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19154 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19155 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
19156 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A

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19157 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
19158 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19159 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19160 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19161 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19162 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19163 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19164 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19165 % \nsqsubset (txfonts/pxfonts)
19166 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19167 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19168 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19169 % \nsqsupset (txfonts/pxfonts)
19170 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19171 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
19172 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
19173 % \nsqsubseq (txfonts/pxfonts)
19174 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19175 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19176 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19177 % \nsqsupseteq (txfonts/pxfonts)
19178 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19179 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19180 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19181 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19182 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19183 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19184 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19185 %* \textoplus -> \varoplus (stmaryrd)
19186 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19187 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19188 %* \textominus -> \varominus (stmaryrd)
19189 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19190 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19191 %* \textotimes -> \varotimes (stmaryrd)
19192 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19193 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19194 %* \textoslash -> \varoslash (stmaryrd)
19195 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19196 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19197 %* \textodot -> \varodot (stmaryrd)
19198 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19199 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19200 %* \textcircledcirc -> \ocirc (mathabx)
19201 %* \textcircledcirc -> \varocircle (stmaryrd)
19202 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19203 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19204 %* \textcircledast -> \varoast (stmaryrd)
19205 %* \textcircledast -> \oasterisk (mathabx)
19206 % U+229D CIRCLED DASH; \circleddash (AmS)
19207 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19208 % U+229E SQUARED PLUS; \boxplus (AmS)
19209 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19210 % U+229F SQUARED MINUS; \boxminus (AmS)
19211 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19212 % U+22A0 SQUARED TIMES; \boxtimes (AmS)

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19213 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19214 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19215 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19216 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19217 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19218 %* \textvdash -> \rightvdash (MnSymbol)
19219 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19220 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19221 %* \textdashv -> \leftvdash (MnSymbol)
19222 % \ndashv (mathabx)
19223 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19224 %* \textndashv -> \nleftvdash (MnSymbol)
19225 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19226 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
19227 %* \textttop -> \downvdash (MnSymbol)
19228 % \ndownvdash (MnSymbol)
19229 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19230 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19231 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19232 %* \textbot -> \upvdash (MnSymbol)
19233 % \nupvdash (MnSymbol)
19234 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19235 %* \textnupvdash -> \nperp (MnSymbol)
19236 % U+22A8 TRUE; \vdash (AmS)
19237 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19238 %* \textvDash -> \models (LaTeX)
19239 %* \textvDash -> \rightmodels (MnSymbol)
19240 % U+22A9 FORCES; \Vdash (AmS)
19241 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19242 %* \textVdash -> \rightVdash (MnSymbol)
19243 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19244 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19245 % \nVvdash (mathabx)
19246 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19247 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19248 % \VDash (mathabx)
19249 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19250 %* \textVDash -> \rightModels (MnSymbol)
19251 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19252 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19253 %* \textnvdash -> \nrightvdash (MnSymbol)
19254 % U+22AD NOT TRUE; \nvDash (AmS)
19255 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19256 %* \textnvDash -> \nrightmodels (MnSymbol)
19257 %* \textnvDash -> \nmodels (MnSymbol)
19258 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19259 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19260 %* \textnVdash -> \nrightVdash (MnSymbol)
19261 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
19262 % STILE; \nVDash (AmS)
19262 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19263 %* \textnVDash -> \nrightModels (MnSymbol)
19264 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19265 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19266 %* \textlhd -> \lessclosed (MnSymbol)
19267 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19268 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3

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19269 %* \texttrhd -> \gtrclosed (MnSymbol)
19270 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19271 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19272 %* \textunlhd -> \leqclosed (MnSymbol)
19273 %* \textunlhd -> \trianglelefteq (MnSymbol)
19274 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19275 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19276 %* \textunrhd -> \geqclosed (MnSymbol)
19277 %* \textunrhd -> \trianglerighteq (MnSymbol)
19278 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19279 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19280 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19281 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19282 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19283 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19284 % U+22BB XOR; \veebar (AmS)
19285 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19286 % U+22BC NAND; \barwedge (mathabx)
19287 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19288 % U+22C6 STAR OPERATOR; \star (LaTeX)
19289 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19290 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19291 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19292 % U+22C8 BOWTIE; \bowtie (LaTeX)
19293 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19294 %* \textbowtie -> \Bowtie (wasysym)
19295 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19296 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19297 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19298 % \rtimes (AmS)
19299 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19300 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19301 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19302 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19303 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19304 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19305 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19306 % \nbacksimeq (txfonts/pxfonts)
19307 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19308 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19309 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19310 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19311 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19312 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19313 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19314 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19315 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19316 % \nSubset (txfonts/pxfonts)
19317 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19318 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19319 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19320 % \nSupset (txfonts/pxfonts)
19321 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19322 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19323 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19324 %* \textCap -> \doublecap (mathabx)

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19325 % U+22D3 DOUBLE UNION; \Cup (AmS)
19326 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19327 %* \textCup -> \doublecup (mathabx)
19328 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19329 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19330 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19331 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19332 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19333 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19334 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19335 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19336 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19337 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19338 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
19339 % \lesseqgtr (AmS)
19340 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19341 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19342 % \gtreqless (AmS)
19343 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19344 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19345 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19346 % \ncurlyeqprec (mathabx)
19347 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19348 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19349 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19350 % \ncurlyeqsucc (mathabx)
19351 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19352 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19353 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19354 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19355 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19356 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19357 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19358 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19359 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19360 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19361 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19362 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19363 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19364 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19365 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19366 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19367 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19368 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19369 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19370 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19371 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19372 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19373 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19374 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19375 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19376 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19377 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)

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19378 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19379 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19380 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19381 % \ntrianglelefteq (AmS)
19382 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19383 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19384 % \ntrianglerighteq (AmS)
19385 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19386 %* \textntrianglerighteq -> \textngeqclosed
19387 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
19388 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19389 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19390 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19391 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19392 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19393 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19394 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19395 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19396 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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51.2.23 Miscellaneous Technical: U+2300 to U+23FF

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19397 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19398 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19399 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19400 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19401 % U+2311 SQUARE LOZENGE; \wasyllozenge (wasysym)
19402 \DeclareTextCommand{\textwasyllozenge}{PU}{\9043\021}%* U+2311
19403 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19404 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19405 % U+231A WATCH; \clock (wasysym)
19406 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19407 %* \textclock -> \Clocklogo (marvosym)
19408 %* \textclock -> \ClockLogo (marvosym)
19409 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19410 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19411 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19412 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19413 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19414 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19415 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19416 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19417 % U+2322 FROWN; \frown (LaTeX)
19418 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19419 % U+2323 SMILE; \smile (LaTeX)
19420 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19421 % U+2328 KEYBOARD; \Keyboard (marvosym)
19422 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19423 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19424 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19425 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19426 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
19427 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19428 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19429 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19430 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19431 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)

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19432 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19433 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19434 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19435 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19436 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19437 % \notbackslash (wasysym)
 19438 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19439 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 19440 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19441 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19442 % \APLleftarrowbox (wasysym)
 19443 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19444 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19445 % \APLrightarrowbox (wasysym)
 19446 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19447 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 parrowbox (wasysym)
 19448 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19449 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19450 % \APLdownarrowbox (wasysym)
 19451 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19452 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19453 % \APLinput (wasysym)
 19454 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19455 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19456 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19457 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19458 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19459 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19460 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19461 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19462 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19463 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19464 % \ForwardToIndex (marvosym)
 19465 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19466 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19467 % \RewindToIndex (marvosym)
 19468 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19469 % U+2422 BLANK SYMBOL
 19470 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19471 % U+2423 OPEN BOX; blank
 19472 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19473 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19474 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19475 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19476 % U+2460 CIRCLED DIGIT ONE; onecircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19478 % U+2461 CIRCLED DIGIT TWO; twocircle

19479 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
19480 % U+2462 CIRCLED DIGIT THREE; threecircle
19481 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
19482 % U+2463 CIRCLED DIGIT FOUR; fourcircle
19483 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
19484 % U+2464 CIRCLED DIGIT FIVE; fivecircle
19485 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
19486 % U+2465 CIRCLED DIGIT SIX; sixcircle
19487 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
19488 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
19489 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
19490 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
19491 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
19492 % U+2468 CIRCLED DIGIT NINE; ninecircle
19493 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
19494 % U+2469 CIRCLED NUMBER TEN; tencircle
19495 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
19496 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
19497 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
19498 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
19499 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
19500 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
19501 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
19502 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
19503 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19504 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19505 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19506 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19507 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19508 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19509 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19510 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19511 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19512 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19513 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19514 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19515 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19516 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19517 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19518 % \CircledA (marvosym)
19519 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19520 %* \textCircledA -> \CleaningA
19521 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19522 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19523 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19524 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19525 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19526 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19527 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19528 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19529 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19530 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19531 % \CleaningF (marvosym)
19532 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19533 % \CleaningFF (marvosym)
19534 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19535 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

19536 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19537 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19538 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19539 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19540 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19541 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19543 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19545 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19547 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19548 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19549 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19550 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19551 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19552 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19553 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19554 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19555 % \CleaningP (marvosym)
 19556 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19557 % \CleaningPP (marvosym)
 19558 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19559 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19561 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19563 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19565 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19567 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19569 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19571 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19573 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19574 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19575 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19576 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19577 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19578 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19579 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19580 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19581 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19582 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19583 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19584 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19585 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19586 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19587 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19588 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19589 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19590 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19591 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19592 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6

19593 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19594 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19595 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19596 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19597 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19598 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19599 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19600 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19601 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19602 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19603 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19604 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19605 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19606 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19607 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19608 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19609 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19610 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19611 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19612 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19613 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19614 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19615 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19616 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19617 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19618 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19619 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19620 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19621 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19622 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19623 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19624 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19625 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19626 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19627 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19628 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19629 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19630 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19631 % U+24EA CIRCLED DIGIT ZERO
 19632 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19633 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19634 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19635 %* \textCuttingLine -> \Kutline (marvosym)
 19636 %* \textCuttingLine -> \CutLine (marvosym)
 19637 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19638 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19639 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19640 %* \textUParrow -> \MoveUp (marvosym)
 19641 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19642 % \bigtriangleup (LaTeX)
 19643 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19644 %* \textbigtriangleup -> \APLup (wasysym)

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19645 %* \textbigtriangleup -> \Bleech (marvosym)
19646 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19647 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19648 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19649 % whiterightpointingtriangle; \triangleright (LaTeX)
19650 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19651 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19652 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19653 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19654 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19655 %* \textDOWNarrow -> \MoveDown (marvosym)
19656 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
19657 % \bigtriangledown (LaTeX)
19658 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19659 %* \textbigtriangledown -> \APLdown (wasysym)
19660 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19661 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19662 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19663 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19664 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19665 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19666 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19667 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19668 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19669 %* \textdiamond -> \Diamond (wasysym)
19670 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19671 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19672 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19673 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19674 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19675 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19676 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19677 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19678 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19679 % \boxbar (stmaryrd)
19680 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19681 % U+25EF LARGE CIRCLE; largecircle
19682 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19683 %* \textbigcircle -> \varbigcirc (stmaryrd)
19684 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19685 % U+2601 CLOUD; \Cloud (ifsym)
19686 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19687 % U+2605 BLACK STAR; \FiveStar (bbding)
19688 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19689 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19690 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19691 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19692 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19693 %* \textPhone -> \Telefon (marvosym)
19694 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19695 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19696 %* \textboxempty -> \Box (wasysym)

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19697 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19698 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19699 %* \textCheckedbox -> \CheckedBox (marvosym)
 19700 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19701 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19702 %* \textCrossedbox -> \XBox (wasysym)
 19703 %* \textCrossedbox -> \CrossedBox (marvosym)
 19704 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19705 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19706 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19707 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19708 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19709 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19710 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19711 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19712 %* \textHandLeft -> \rightpointleft (fourier)
 19713 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19714 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19715 %* \textHandRight -> \leftpointright (fourier)
 19716 %* \textHandRight -> \PointingHand (marvosym)
 19717 %* \textHandRight -> \Pointinghand (marvosym)
 19718 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19719 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19720 %* \textRadioactivity -> \Radiation (ifsym)
 19721 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19722 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19723 % U+2625 ANKH; \Ankh (marvosym)
 19724 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19725 % U+262F YIN YANG; \YinYang (marvosym)
 19726 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19727 %* \textYinYang -> \Yinyang (marvosym)
 19728 %* \textYinYang -> \YingYang (marvosym)
 19729 %* \textYinYang -> \Yingyang (marvosym)
 19730 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19731 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19732 %* \textfrownie -> \Frowny (marvosym)
 19733 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19734 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19735 %* \textsmiley -> \Smiley (marvosym)
 19736 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19737 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19738 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19739 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19740 %* \textsun -> \Sun (marvosym)
 19741 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19742 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19743 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19744 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19745 % U+263F MERCURY; \mercury (wasysym)
 19746 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19747 %* \textmercury -> \Mercury (marvosym)
 19748 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19749 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19750 %* \textPUfemale -> \textfemale (tipx)
 19751 %* \textPUfemale -> \female (wasysym)
 19752 %* \textPUfemale -> \venus (wasysym)
 19753 %* \textPUfemale -> \Venus (marvosym)

19754 %* \textPUfemale -> \Female (marvosym)
 19755 % U+2641 EARTH; \earth (wasysym)
 19756 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
 19757 %* \textearth -> \Earth (marvosym)
 19758 % U+2642 MALE SIGN; \male, mars; \male (wasysym)
 19759 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
 19760 %* \textmale -> \mars (wasysym)
 19761 %* \textmale -> \Mars (marvosym)
 19762 %* \textmale -> \Male (marvosym)
 19763 % U+2643 JUPITER; \jupiter (wasysym)
 19764 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
 19765 %* \textjupiter -> \Jupiter (marvosym)
 19766 % U+2644 SATURN; \saturn (wasysym)
 19767 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
 19768 %* \textsaturn -> \Saturn (marvosym)
 19769 % U+2645 URANUS; \uranus (wasysym)
 19770 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
 19771 %* \texturanus -> \Uranus (marvosym)
 19772 % U+2646 NEPTUNE; \neptune (wasysym)
 19773 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
 19774 %* \textneptune -> \Neptune (marvosym)
 19775 % U+2647 PLUTO; \pluto (wasysym)
 19776 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
 19777 %* \textpluto -> \Pluto (marvosym)
 19778 % U+2648 ARIES; \aries (wasysym)
 19779 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19780 %* \textaries -> \Aries (marvosym)
 19781 % U+2649 TAURUS; \taurus (wasysym)
 19782 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19783 %* \texttaurus -> \Taurus (marvosym)
 19784 % U+264A GEMINI; \gemini (wasysym)
 19785 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19786 %* \textgemini -> \Gemini (marvosym)
 19787 % U+264B CANCER; \cancer (wasysym)
 19788 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19789 %* \textcancer -> \Cancer (marvosym)
 19790 % U+264C LEO; \leo (wasysym)
 19791 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19792 %* \textleo -> \Leo (marvosym)
 19793 % U+264D VIRGO; \virgo (wasysym)
 19794 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19795 %* \textvirgo -> \Virgo (marvosym)
 19796 % U+264E LIBRA; \libra (wasysym)
 19797 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19798 %* \textlibra -> \Libra (marvosym)
 19799 % U+264F SCORPIO; \scorpio (wasysym)
 19800 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19801 %* \textscorpio -> \Scorpio (marvosym)
 19802 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19803 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19804 %* \textsagittarius -> \Sagittarius (marvosym)
 19805 % U+2651 CAPRICORN; \capricornus (wasysym)
 19806 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19807 %* \textcapricornus -> \Capricorn (marvosym)
 19808 % U+2652 AQUARIUS; \aquarius (wasysym)
 19809 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19810 %* \textaquarius -> \Aquarius (marvosym)

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19811 % U+2653 PISCES; \pisces (wasysym)
19812 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19813 %* \textpisces -> \Pisces (marvosym)
19814 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19815 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19816 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19817 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19818 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19819 %* \textheartsuitwhite -> \Heart (marvosym)
19820 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19821 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19822 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19823 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19824 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19825 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19826 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19827 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19828 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19829 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19830 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19831 % U+2666 BLACK DIAMOND SUIT; diamond
19832 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19833 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19834 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19835 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19836 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19837 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19838 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19839 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19840 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19841 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19842 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19843 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19844 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19845 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19846 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19847 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19848 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19849 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19850 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19851 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19852 %* \textrecycle -> \Recycling (marvosym)
19853 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19854 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19855 % U+2691 BLACK FLAG; \Flag (ifsym)
19856 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19857 %* \textFlag -> \VarFlag (ifsym)
19858 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19859 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19860 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19861 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19862 %* \textdsmilitary -> \textxswup (fourier)
19863 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19864 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19865 % U+2696 SCALES; \dsjuridical (dictsym)
19866 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696

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19867 % U+2697 ALEMBIC; \dschemical (dictsym)
 19868 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19869 % U+2698 FLOWER; \dsbiological (dictsym)
 19870 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19871 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19872 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19873 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19874 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19875 % U+26A0 WARNING SIGN; \danger (fourier)
 19876 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19877 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19878 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19879 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19880 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19881 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19882 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19883 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19884 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19885 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19886 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19887 % U+26AD MARRIAGE SYMBOL
 19888 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19889 % U+26AE DIVORCE SYMBOL
 19890 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19891 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19892 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19893 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19894 % U+26B9 SEXTILE; \hexstar (wasysym)
 19895 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19896 % U+26BD SOCCER BALL; \Football (marvosym)
 19897 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19898 %* \textSoccerBall -> \Football (marvosym)
 19899 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19900 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19901 % U+26C6 RAIN; \Rain (ifsym)
 19902 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19903 % U+26D4 NO ENTRY; \noway (fourier)
 19904 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19905 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19906 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19907 % U+26FA TENT; \Tent (ifsym)
 19908 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19909 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
 19910 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19911 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19912 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19913 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19914 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19915 %* \textScissorRight -> \RightScissors (marvosym)
 19916 %* \textScissorRight -> \Leftscissors (marvosym)
 19917 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19918 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19919 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19920 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704

19921 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19922 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19923 % U+2707 TAPE DRIVE; \Tape (bbling)
 19924 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19925 % U+2708 AIRPLANE; \Plane (bbling)
 19926 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19927 % U+2709 ENVELOPE; \Envelope (bbling),
 19928 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19929 %* \textEnvelope -> \Letter (marvosym)
 19930 % U+270C VICTORY HAND; \Peace (bbling)
 19931 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19932 % U+270D WRITING HAND; \WritingHand (marvosym)
 19933 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19934 %* \textWritingHand -> \Writinghand (marvosym)
 19935 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbling)
 19936 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19937 % U+270F PENCIL; \PencilRight (bbling)
 19938 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19939 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbling)
 19940 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19941 % U+2711 WHITE NIB; \NibRight (bbling)
 19942 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19943 % U+2712 BLACK NIB; \NibSolidRight (bbling)
 19944 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19945 % U+2713 CHECK MARK; checkmark; \Checkmark (bbling)
 19946 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19947 %* \textCheckmark -> \checkmark (MnSymbol)
 19948 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bbling)
 19949 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19950 % U+2715 MULTIPLICATION X; \XSolid (bbling)
 19951 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19952 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bbling)
 19953 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19954 % U+2717 BALLOT X; \XSolidBrush (bbling)
 19955 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19956 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bbling)
 19957 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19958 % U+271A HEAVY GREEK CROSS; \Plus (bbling)
 19959 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19960 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bbling)
 19961 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19962 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bbling)
 19963 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19964 % U+271D LATIN CROSS; \Cross (bbling)
 19965 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19966 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bbling)
 19967 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19968 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bbling)
 19969 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19970 % U+2720 MALTESE CROSS; \CrossMaltese (bbling)
 19971 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19972 % U+2721 STAR OF DAVID; \DavidStar (bbling)
 19973 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19974 %* \textDavidStar -> \davidstar (wasysym)
 19975 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bbling)
 19976 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19977 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bbling)

19978 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19979 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (b
 dding)
 19980 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19981 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (b
 bding)
 19982 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19983 % U+2726 BLACK FOUR POINTED STAR; \FourStar (b
 bding)
 19984 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19985 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (b
 bding)
 19986 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19987 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (b
 bding)
 19988 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19989 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (b
 bding)
 19990 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19991 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (b
 bding)
 19992 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19993 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (b
 bding)
 19994 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19995 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (b
 bding)
 19996 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19997 % U+272F PINWHEEL STAR; \FiveStarConvex (b
 bding)
 19998 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19999 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (b
 bding)
 20000 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 20001 % U+2731 HEAVY ASTERISK; \AsteriskBold (b
 bding)
 20002 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 20003 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (b
 bding)
 20004 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 20005 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (b
 bding)
 20006 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 20007 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (b
 bding)
 20008 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 20009 % U+2736 SIX POINTED BLACK STAR; \SixStar (b
 bding)
 20010 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 20011 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (b
 bding)
 20012 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 20013 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \Eight
 StarBold (b
 bding)
 20014 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 20015 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (b
 bding)
 20016 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 20017 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (b
 bding)
 20018 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 20019 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (b
 bding)
 20020 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 20021 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 20022 % \SixFlowerOpenCenter (b
 bding)
 20023 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 20024 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (b
 bding)
 20025 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 20026 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl
 ternate (b
 bding)
 20027 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 20028 % U+273F BLACK FLORETTE; \FiveFlowerPetal (b
 bding)
 20029 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F

20030 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 20031 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 20032 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 20033 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 20034 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 20035 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 20036 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 20037 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20038 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20039 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 20040 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20041 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20042 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20043 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20044 % U+2747 SPARKLE; \Sparkle (bding)
 20045 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20046 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20047 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20048 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20049 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20050 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20051 % \EightFlowerPetalRemoved (bding)
 20052 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20053 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20054 % \EightAsterisk (bding)
 20055 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20056 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20057 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20058 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20059 % \SquareShadowBottomRight (bding)
 20060 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20061 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20062 % \SquareShadowTopRight (bding)
 20063 \DeclareTextCommand{\textSquareShadowTopRight}{PU}{\9047\120}%* U+2750
 20064 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20065 % \SquareCastShadowBottomRight (bding)
 20066 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20067 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20068 % \SquareCastShadowTopRight (bding)
 20069 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20070 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 20071 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20072 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20073 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20074 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20075 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20076 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20077 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A
51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF
 20078 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20079 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20080 % \notperp (mathabx)

20081 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20082 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20083 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20084 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20085 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20086 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20087 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20088 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20089 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20090 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20091 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20092 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20093 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20094 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20095 % \circlearrowleft (AmS)
 20096 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20097 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20098 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20099 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20100 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20101 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20102 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20103 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20104 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20105 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20106 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20107 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 20108 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20109 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20110 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20111 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20112 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20113 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20114 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20115 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20116 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20117 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20118 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20119 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20120 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20121 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20122 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20123 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20124 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20125 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20126 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20127 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20128 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20129 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)


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20130 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
20131 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
20132 % \rcurvearrowne (MnSymbol)
20133 \DeclareTextCommand{\texttrcurvearrowne}{PU}{\9051\064}%* U+2934
20134 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
20135 % \lcurvearrowse (MnSymbol)
20136 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
20137 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
20138 % \lcurvearrowsw (MnSymbol)
20139 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
20140 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
WARDS;
20141 % \rcurvearrowse (MnSymbol)
20142 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
20143 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
Symbol)
20144 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
20145 %* \textlcurvearrowdown -> \RightTorque (marvosym)
20146 %* \textlcurvearrowdown -> \Righttorque (marvosym)
20147 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
20148 % \rcurvearrowdown (MnSymbol)
20149 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
20150 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
20151 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
20152 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
20153 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
20154 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
20155 % \rcurvearrowright (MnSymbol)
20156 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
20157 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
20158 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
20159 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
20160 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
20161 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
20162 % \updownharpoonrightleft (MnSymbol)
20163 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
20164 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
20165 % \updownharpoonleftright (MnSymbol)
20166 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
20167 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
20168 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
20169 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
20170 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
20171 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
20172 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
20173 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
20174 % WITH BARB DOWN; \rightrightarpoons (mathabx)
20175 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
20176 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
20177 % WITH BARB RIGHT; \downdownharpoons (mathabx)

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20178 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20179 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20180 % \leftbarharpoon (mathabx)
 20181 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20182 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20183 % LONG DASH; \barleftharpoon (mathabx)
 20184 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20185 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20186 % LONG DASH; \rightbarharpoon (mathabx)
 20187 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20188 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20189 % LONG DASH; \barrightharpoon (mathabx)
 20190 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20191 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20192 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20193 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20194 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20195 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20196 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20197 % U+297F DOWN FISH TAIL
 20198 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20199 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20200 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 20201 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20202 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20203 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20204 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20205 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20206 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20207 %* \textobar -> \textvarobar (stmaryrd)
 20208 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20209 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20210 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20211 %* \textobslash -> \obackslash (mathabx)
 20212 %* \textobslash -> \varobslash (stmaryrd)
 20213 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20214 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20215 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20216 %* \textobot -> \odplus (ulsy)
 20217 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20218 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20219 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20220 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20221 %* \textolessthan -> \varolessthan (stmaryrd)
 20222 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20223 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20224 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20225 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20226 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20227 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20228 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20229 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)

20230 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20231 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20232 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20233 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20234 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20235 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20236 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20237 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20238 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20239 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20240 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20241 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20242 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20243 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20244 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20245 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20246 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20247 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20248 % pxfonts, wasysym)
 20249 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20250 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20251 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20252 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20253 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20254 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20255 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20256 %* \textminusdot -> \divdot (mathabx)
 20257 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20258 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20259 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20260 % \dtimes (mathdesign)
 20261 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20262 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20263 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20264 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20265 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20266 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20267 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20268 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20269 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20270 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20271 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20272 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20273 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20274 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20275 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20276 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20277 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20278 %* \textdoublevee -> \merge (stmaryrd)
 20279 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20280 % \doublebarwedge (AmS)
 20281 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20282 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20283 % \veedoublebar (mathabx)
 20284 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63

20285 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20286 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20287 % \neqdot (MnSymbol)
 20288 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20289 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20290 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20291 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20292 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20293 % \nleqslant (txfonts/pxfonts)
 20294 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20295 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20296 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20297 % \ngeqslant (txfonts/pxfonts)
 20298 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20299 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20300 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20301 % \nlessapprox (txfonts/pxfonts)
 20302 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20303 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20304 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20305 % \ngtrapprox (txfonts/pxfonts)
 20306 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20307 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20308 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20309 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20310 % \gneq (AmS)
 20311 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20312 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20313 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20314 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20315 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20316 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 20317 % \lesseqgtr (AmS)
 20318 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20319 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 20320 % \gtreqless (AmS)
 20321 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20322 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20323 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20324 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20325 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20326 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20327 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20328 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20329 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20330 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 20331 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20332 % \npreceq (txfonts/pxfonts)
 20333 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20334 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 20335 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20336 % \nsucceq (txfonts/pxfonts)
 20337 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338

20338 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20339 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20340 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20341 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20342 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20343 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20344 % \npreceqq (txfonts/pxfonts)
 20345 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20346 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20347 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20348 % \nsucceqq (txfonts/pxfonts)
 20349 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20350 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20351 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20352 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20353 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20354 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20355 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20356 % \nprecapprox (txfonts/pxfonts)
 20357 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20358 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20359 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20360 % \nsuccapprox (txfonts/pxfonts)
 20361 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20362 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20363 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20364 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20365 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20366 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20367 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20368 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20369 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20370 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20371 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20372 % \nsupseteqq (mathabx)
 20373 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20374 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20375 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20376 %* \textdashV -> \leftVdash (MnSymbol)
 20377 % \ndashV (mathabx)
 20378 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20379 %* \textndashV -> \nleftVdash (MnSymbol)
 20380 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20381 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20382 %* \textDashv -> \leftmodels (MnSymbol)
 20383 % \nDashv (mathabx)
 20384 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20385 %* \textnDashv -> \nleftmodels (MnSymbol)
 20386 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20387 % \DashV (mathabx)
 20388 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20389 %* \textDashV -> \leftModels (MnSymbol)
 20390 % \nDashV (mathabx)

20391 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20392 %* \textnDashV -> \nleftModels (MnSymbol)
 20393 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20394 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20395 % \downmodels (MnSymbol)
 20396 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20397 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20398 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20399 % \nupmodels (MnSymbol)
 20400 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20401 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20402 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20403 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20404 % \interleave (stmaryrd)
 20405 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20406 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
 20407 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
 20408 %* \textslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20409 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20410 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20411 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20412 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20413 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20414 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20415 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20416 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20417 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20418 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20419 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20420 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20421 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20422 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20423 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20424 % \textdownstep (tipa)
 20425 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20426 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20427 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20428 %* \textPUheng -> \textheng (tipx)
 20429 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \texthookfour (tipx)
 20430 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20431 %* \textPULhookfour -> \texthookfour (tipx)
 20432 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20433 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20434 %* \textPUscf -> \textscf (tipx)
 20435 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 20436 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20437 %* \textPUaolig -> \textao lig (tipx)

20438 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20439 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20440 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20441 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20442 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20443 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20444 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20445 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20446 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20447 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20448 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20449 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20450 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20451 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20452 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20453 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20454 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20455 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20456 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20457 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20458 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20459 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20460 %* \textfullnote -> \Ganz (harmony)
 20461 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20462 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20463 %* \texthalfnote -> \Halb (harmony)
 20464 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20465 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20466 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20467 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20468 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20469 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20470 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20471 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20472 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20473 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20474 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20475 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20476 % U+1F468 MAN; \ManFace (marvosym)
 20477 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20478 % U+1F469 WOMAN; \WomanFace (marvosym)
 20479 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20480 %* \textWomanFace -> \Womanface (marvosym)
 20481 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20482 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20483 %* \textFax -> \Faxmachine (marvosym)
 20484 % U+1F525 FIRE; \Fire (ifsym)
 20485 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20486 % U+1F6B2 BICYCLE; \Bicycle (marvosym)

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20487 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20488 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20489 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20490 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20491 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

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51.2.45 Miscellaneous

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20492 \DeclareTextCommand{\SS}{PU}{SS}%
20493 % \textcopyleft (textcomp)
20494 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20495 % \ccnc (ccllicenses)
20496 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20497 % \ccnd (ccllicenses)
20498 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20499 % \ccsa (ccllicenses)
20500 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20501 % \Info (marvosym, china2e)
20502 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20503 % \CESign (marvosym)
20504 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20505 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20506 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20507 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20508 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20509 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20510 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20511 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20512 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20513 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20514 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20515 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20516 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20517 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20518 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20519 \</puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20520 (*puvnenc)

20521 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20522 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20523 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20524 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20525 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20526 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20527 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20528 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20529 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20530 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20531 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0

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20532 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
 20533 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20534 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20535 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20536 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20537 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20538 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20539 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20540 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20541 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20542 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20543 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20544 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20545 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20546 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20547 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20548 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20549 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20550 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20551 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20552 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20553 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20554 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20555 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20556 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20557 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20558 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20559 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20560 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20561 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20562 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20563 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20564 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20565 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20566 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20567 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20568 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20569 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20570 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20571 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20572 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20573 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20574 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20575 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20576 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20577 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20578 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20579 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20580 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20581 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20582 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20583 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20584 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20585 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20586 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20587 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20588 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

20589 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20590 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20591 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20592 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20593 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20594 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20595 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20596 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20597 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20598 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20599 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20600 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20601 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20602 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20603 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20604 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20605 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20606 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20607 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20608 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20609 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20610 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20611 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20612 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20613 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20614 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20615 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20616 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20617 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20618 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20619 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20620 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20621 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20622 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20623 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20624 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20625 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20626 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20627 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20628 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20629 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20630 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20631 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20632 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20633 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20634 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20635 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20636 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20637 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20638 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20639 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20640 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20641 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20642 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20643 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20644 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20645 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA

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20646 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20647 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20648 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20649 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20650 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20651 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20652 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20653 </p>

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51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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20654 <*puarenc>

20655 % U+0621;afii57409;ARABIC LETTER HAMZA
20656 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20657 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20658 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20659 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20660 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20661 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20662 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20663 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20664 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20665 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20666 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20667 % U+0627;afii57415;ARABIC LETTER ALEF
20668 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20669 % U+0628;afii57416;ARABIC LETTER BEH
20670 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20671 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20672 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20673 % U+062A;afii57418;ARABIC LETTER TEH
20674 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20675 % U+062B;afii57419;ARABIC LETTER THEH
20676 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20677 % U+062C;afii57420;ARABIC LETTER JEEM
20678 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20679 % U+062D;afii57421;ARABIC LETTER HAH
20680 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20681 % U+062E;afii57422;ARABIC LETTER KHAH
20682 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20683 % U+062F;afii57423;ARABIC LETTER DAL
20684 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20685 % U+0630;afii57424;ARABIC LETTER THAL
20686 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20687 % U+0631;afii57425;ARABIC LETTER REH
20688 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20689 % U+0632;afii57426;ARABIC LETTER ZAIN
20690 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20691 % U+0633;afii57427;ARABIC LETTER SEEN
20692 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20693 % U+0634;afii57428;ARABIC LETTER SHEEN
20694 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20695 % U+0635;afii57429;ARABIC LETTER SAD
20696 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20697 % U+0636;afii57430;ARABIC LETTER DAD

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20698 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20699 % U+0637;afii57431;ARABIC LETTER TAH
 20700 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20701 % U+0638;afii57432;ARABIC LETTER ZAH
 20702 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20703 % U+0639;afii57433;ARABIC LETTER AIN
 20704 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20705 % U+063A;afii57434;ARABIC LETTER GHAIN
 20706 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20707 % U+0640;afii57440;ARABIC TATWEEL
 20708 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20709 % U+0641;afii57441;ARABIC LETTER FEH
 20710 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20711 % U+0642;afii57442;ARABIC LETTER QAF
 20712 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20713 % U+0643;afii57443;ARABIC LETTER KAF
 20714 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20715 % U+0644;afii57444;ARABIC LETTER LAM
 20716 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20717 % U+0645;afii57445;ARABIC LETTER MEEM
 20718 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20719 % U+0646;afii57446;ARABIC LETTER NOON
 20720 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20721 % U+0647;afii57470;ARABIC LETTER HEH
 20722 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20723 % U+0648;afii57448;ARABIC LETTER WAW
 20724 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20725 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20726 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20727 % U+064A;afii57450;ARABIC LETTER YEH
 20728 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20729 % U+064B;afii57451;ARABIC FATHATAN
 20730 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20731 % U+064C;afii57452;ARABIC DAMMATAN
 20732 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20733 % U+064D;afii57453;ARABIC KASRATAN
 20734 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20735 % U+064E;afii57454;ARABIC FATHA
 20736 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20737 % U+064F;afii57455;ARABIC DAMMA
 20738 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20739 % U+0650;afii57456;ARABIC KASRA
 20740 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20741 % U+0651;afii57457;ARABIC SHADDA
 20742 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20743 % U+0652;afii57458;ARABIC SUKUN
 20744 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20745 % U+067E ARABIC LETTER PEH; afii57506
 20746 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20747 % U+0686 ARABIC LETTER TCHEH; afii57507
 20748 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20749 % U+0698 ARABIC LETTER JEH; afii57508
 20750 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20751 % U+06A9 ARABIC LETTER KEHEH
 20752 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

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20753 % U+06AF ARABIC LETTER GAF; afi57509
20754 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
20755 % U+06CC ARABIC LETTER FARSI YEH
20756 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

20757 % U+200C ZERO WIDTH NON-JOINER; afi61664
20758 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
20759 % U+200D ZERO WIDTH JOINER; afi301
20760 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

20761 (/puarenc)

20762 (*psdextra)
20763 \Hy@VersionCheck{psdextra.def}
20764 \newcommand*{\psdmapshortnames}{%
20765   \let\MVPlus\textMVPlus
20766   \let\MVComma\textMVComma
20767   \let\MVMinus\textMVMinus
20768   \let\MVPeriod\textMVPeriod
20769   \let\MVDivision\textMVDivision
20770   \let\MVZero\textMVZero
20771   \let\MVOne\textMVOne
20772   \let\MVTwo\textMVTwo
20773   \let\MVThree\textMVThree
20774   \let\MVFour\textMVFour
20775   \let\MVFive\textMVFive
20776   \let\MVSix\textMVSix
20777   \let\MVSeven\textMVSeven
20778   \let\MVEight\textMVEight
20779   \let\MVNine\textMVNine
20780   \let\MVAt\textMVAt
20781   \let\copyright\textcopyright
20782   \let\twosuperior\texttwosuperior
20783   \let\threesuperior\textthreesuperior
20784   \let\onesuperior\textonesuperior
20785   \let\Thorn\textThorn
20786   \let\thorn\textthorn
20787   \let\hbar\texthbar
20788   \let\hausaB\texthausaB
20789   \let\hausaD\texthausaD
20790   \let\hausaK\texthausaK
20791   \let\barl\textbarl
20792   \let\inve\textinve
20793   \let\slashc\textslashc
20794   \let\scripta\textscripta
20795   \let\openo\textopeno
20796   \let\rtaild\textrtaild
20797   \let\reve\textreve
20798   \let\schwa\textschwa
20799   \let\niepsilon\textniepsilon
20800   \let\revepsilon\textrevepsilon
20801   \let\rhookrepsilon\texthookrepsilon
20802   \let\scriptg\textscriptg
20803   \let\scg\textscg
20804   \let\ipagamma\textipagamma
20805   \let\babygamma\textbabygamma
20806   \let\bari\textbari
20807   \let\niiota\textniiota
20808   \let\sci\textsci

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20809 \let\scn\textscn
 20810 \let\niphi\textniphi
 20811 \let\longlegr\textlonglegr
 20812 \let\scr\textscr
 20813 \let\invscr\textinvscr
 20814 \let\esh\textesh
 20815 \let\baru\textbaru
 20816 \let\niupsilon\textniupsilon
 20817 \let\scriptv\textscriptv
 20818 \let\turnv\textturnv
 20819 \let\turnw\textturnw
 20820 \let\turny\textturny
 20821 \let\scy\textscy
 20822 \let\yogh\textyogh
 20823 \let\glotstop\textglotstop
 20824 \let\revglotstop\textrevglotstop
 20825 \let\invglotstop\textinvglotstop
 20826 \let\Gamma\textGamma
 20827 \let\Delta\textDelta
 20828 \let\Theta\textTheta
 20829 \let\Lambda\textLambda
 20830 \let\Xi\textXi
 20831 \let\Pi\textPi
 20832 \let\Sigma\textSigma
 20833 \let\Upsilon\textUpsilon
 20834 \let\Phi\textPhi
 20835 \let\Psi\textPsi
 20836 \let\Omega\textOmega
 20837 \let\alpha\textalpha
 20838 \let\beta\textbeta
 20839 \let\gamma\textgamma
 20840 \let\delta\textdelta
 20841 \let\epsilon\textepsilon
 20842 \let\zeta\textzeta
 20843 \let\eta\texteta
 20844 \let\theta\texttheta
 20845 \let\iota\textiota
 20846 \let\kappa\textkappa
 20847 \let\lambda\textlambda
 20848 \let\mu\textmu
 20849 \let\mugreek\textmugreek
 20850 \let\nu\textnu
 20851 \let\xi\textxi
 20852 \let\pi\textpi
 20853 \let\rho\rho
 20854 \let\varsigma\textvarsigma
 20855 \let\sigma\textsigma
 20856 \let\tau\texttau
 20857 \let\upsilon\textupsilon
 20858 \let\phi\textphi
 20859 \let\chi\textchi
 20860 \let\psi\textpsi
 20861 \let\omega\textomega
 20862 \let\scd\textscd
 20863 \let\scu\textscu
 20864 \let\iinferior\textiinferior
 20865 \let\rinferior\textrinferior

20866 \let\uinferior\textuinferior
 20867 \let\vinferior\textvinferior
 20868 \let\betainferior\textbetainferior
 20869 \let\gammainferior\textgammainferior
 20870 \let\rhoinferior\textrhoinferior
 20871 \let\phiinferior\textphiinferior
 20872 \let\chiinferior\textchiinferior
 20873 \let\barsci\textbarsci
 20874 \let\barp\textbarp
 20875 \let\barscu\textbarscu
 20876 \let\htrtaild\texthtrtaild
 20877 \let\dagger\textdagger
 20878 \let\bullet\textbullet
 20879 \let\hdotfor\texthdotfor
 20880 \let\prime\textprime
 20881 \let\second\textsecond
 20882 \let\third\textthird
 20883 \let\backprime\textbackprime
 20884 \let\lefttherefore\textlefttherefore
 20885 \let\fourth\textfourth
 20886 \let\diamonddots\textdiamonddots
 20887 \let\zerosuperior\textzerosuperior
 20888 \let\isuperior\textisuperior
 20889 \let\foursuperior\textfoursuperior
 20890 \let\fivesuperior\textfivesuperior
 20891 \let\sixsuperior\textsixsuperior
 20892 \let\sevensuperior\textsevensuperior
 20893 \let\eightsuperior\texteightsuperior
 20894 \let\ninesuperior\textninesuperior
 20895 \let\plussuperior\textplussuperior
 20896 \let\minussuperior\textminussuperior
 20897 \let>equalsuperior\textequalsuperior
 20898 \let\parenleftsuperior\textparenleftsuperior
 20899 \let\parenrightsuperior\textparenrightsuperior
 20900 \let\nsuperior\textnsuperior
 20901 \let\zeroinferior\textzeroinferior
 20902 \let\oneinferior\textoneinferior
 20903 \let\twoinferior\texttwoinferior
 20904 \let\threeinferior\textthreeinferior
 20905 \let\fourinferior\textfourinferior
 20906 \let\fiveinferior\textfiveinferior
 20907 \let\sixinferior\textsixinferior
 20908 \let\seveninferior\textseveninferior
 20909 \let\eightinferior\texteightinferior
 20910 \let\nineinferior\textnineinferior
 20911 \let\plusinferior\textplusinferior
 20912 \let\minusinferior\textminusinferior
 20913 \let>equalsinferior\textequalsinferior
 20914 \let\parenleftinferior\textparenleftinferior
 20915 \let\parenrightinferior\textparenrightinferior
 20916 \let\ainferior\textainferior
 20917 \let\einferior\texteinferior
 20918 \let\oinferior\textoinferior
 20919 \let\xinferior\textxinferior
 20920 \let\schwainferior\textschwainferior
 20921 \let\hinferior\texthinferior
 20922 \let\kinferior\textkinferior

20923 \let\linferior\textlinferior
 20924 \let\minferior\textminferior
 20925 \let\ninferior\textninferior
 20926 \let\pinferior\textpinferior
 20927 \let\sinferior\textsinferior
 20928 \let\tinferior\texttinferior
 20929 \let\Deleatur\textDeleatur
 20930 \let\hslash\texthslash
 20931 \let\Im\textIm
 20932 \let\ell\textell
 20933 \let\wp\textwp
 20934 \let\Re\textRe
 20935 \let\mho\textmho
 20936 \let\riota\textriota
 20937 \let\Finv\textFinv
 20938 \let\aleph\textaleph
 20939 \let\beth\textbeth
 20940 \let\gimel\textgimel
 20941 \let\daleth\textdaleth
 20942 \let\xfax\textfax
 20943 \let\Game\textGame
 20944 \let\leftarrow\textleftarrow
 20945 \let\uparrow\textuparrow
 20946 \let\rightarrow\textrightarrow
 20947 \let\downarrow\textdownarrow
 20948 \let\leftrightarrow\textleftrightarrow
 20949 \let\updownarrow\textupdownarrow
 20950 \let\nwarrow\textnwarrow
 20951 \let\nearrow\textnearrow
 20952 \let\searrow\textsearrow
 20953 \let\swarrow\textswarrow
 20954 \let\nleftarrow\textnleftarrow
 20955 \let\nrightarrow\textnrightarrow
 20956 \let\twoheadleftarrow\texttwoheadleftarrow
 20957 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20958 \let\twoheaduparrow\texttwoheaduparrow
 20959 \let\twoheadrightarrow\texttwoheadrightarrow
 20960 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20961 \let\twoheaddownarrow\texttwoheaddownarrow
 20962 \let\leftarrowtail\textleftarrowtail
 20963 \let\rightarrowtail\textrightarrowtail
 20964 \let\mapsto\textmapsto
 20965 \let\hookleftarrow\texthookleftarrow
 20966 \let\hookrightarrow\texthookrightarrow
 20967 \let\looparrowleft\textlooparrowleft
 20968 \let\looparrowright\textlooparrowright
 20969 \let\leftrightharpoonup\textleftrightharpoonup
 20970 \let\lightning\textlightning
 20971 \let\dlsh\textdlsh
 20972 \let\curvearrowleft\textcurvearrowleft
 20973 \let\curvearrowright\textcurvearrowright
 20974 \let\leftharpoonup\textleftharpoonup
 20975 \let\leftharpoondown\textleftharpoondown
 20976 \let\upharpoonright\textupharpoonright
 20977 \let\upharpoonleft\textupharpoonleft
 20978 \let\upharpoonup\textupharpoonup
 20979 \let\upharpoondown\textupharpoondown

20980 $\backslash\text{downharpoonright}$
 20981 $\backslash\text{downharpoonleft}$
 20982 $\backslash\text{rightleftarrows}$
 20983 $\backslash\text{updownarrows}$
 20984 $\backslash\text{leftrightharpoons}$
 20985 $\backslash\text{leftleftarrows}$
 20986 $\backslash\text{upuparrows}$
 20987 $\backslash\text{rightrightarrows}$
 20988 $\backslash\text{downdownarrows}$
 20989 $\backslash\text{leftrightharpoons}$
 20990 $\backslash\text{rightleftharpoons}$
 20991 $\backslash\text{nLeftarrow}$
 20992 $\backslash\text{nLeftrightarrow}$
 20993 $\backslash\text{nRrightarrow}$
 20994 $\backslash\text{Leftarrow}$
 20995 $\backslash\text{Uparrow}$
 20996 $\backslash\text{Rrightarrow}$
 20997 $\backslash\text{Downarrow}$
 20998 $\backslash\text{Leftrightarrow}$
 20999 $\backslash\text{Updownarrow}$
 21000 $\backslash\text{Nwarrow}$
 21001 $\backslash\text{Nearrow}$
 21002 $\backslash\text{Searrow}$
 21003 $\backslash\text{Swarrow}$
 21004 $\backslash\text{Lleftarrow}$
 21005 $\backslash\text{Rrightarrow}$
 21006 $\backslash\text{leftsquigarrow}$
 21007 $\backslash\text{rightsquigarrow}$
 21008 $\backslash\text{dashleftarrow}$
 21009 $\backslash\text{dasheduparrow}$
 21010 $\backslash\text{dashrightarrow}$
 21011 $\backslash\text{dasheddownarrow}$
 21012 $\backslash\text{pointer}$
 21013 $\backslash\text{downuparrows}$
 21014 $\backslash\text{leftarrowtriangle}$
 21015 $\backslash\text{rightarrowtriangle}$
 21016 $\backslash\text{leftrightarrowtriangle}$
 21017 $\backslash\text{forall}$
 21018 $\backslash\text{complement}$
 21019 $\backslash\text{partial}$
 21020 $\backslash\text{exists}$
 21021 $\backslash\text{nexists}$
 21022 $\backslash\text{emptyset}$
 21023 $\backslash\text{triangle}$
 21024 $\backslash\text{nabla}$
 21025 $\backslash\text{in}$
 21026 $\backslash\text{notin}$
 21027 $\backslash\text{smallin}$
 21028 $\backslash\text{ni}$
 21029 $\backslash\text{notowner}$
 21030 $\backslash\text{smallowns}$
 21031 $\backslash\text{prod}$
 21032 $\backslash\text{amalg}$
 21033 $\backslash\text{sum}$
 21034 $\backslash\text{mp}$
 21035 $\backslash\text{dotplus}$
 21036 $\backslash\text{Divides}$

21037 \let\DividesNot\textDividesNot
 21038 \let\setminus\textsetminus
 21039 \let\ast\textast
 21040 \let\circ\textcirc
 21041 \let\surd\textsurd
 21042 \let\propto\textpropto
 21043 \let\infty\textinfty
 21044 \let\angle\textangle
 21045 \let\measuredangle\textmeasuredangle
 21046 \let\sphericalangle\textsphericalangle
 21047 \let\mid\textmid
 21048 \let\nmid\textnmid
 21049 \let\parallel\textparallel
 21050 \let\nparallel\textnparallel
 21051 \let\wedge\textwedge
 21052 \let\owedge\textowedge
 21053 \let\vee\textvee
 21054 \let\ovee\textovee
 21055 \let\cap\textcap
 21056 \let\cup\textcup
 21057 \let\int\textint
 21058 \let\iint\textiint
 21059 \let\iiint\textiiint
 21060 \let\oint\textoint
 21061 \let\oiint\textoiint
 21062 \let\ointclockwise\textointclockwise
 21063 \let\ointctrlockwise\textointctrlockwise
 21064 \let\therefore\texttherefore
 21065 \let\because\textbecause
 21066 \let\vdots\textvdots
 21067 \let\squaredots\textsquaredots
 21068 \let\dotminus\textdotminus
 21069 \let\eqcolon\texteqcolon
 21070 \let\sim\textsim
 21071 \let\backsim\textbacksim
 21072 \let\nbacksim\textnbacksim
 21073 \let\wr\textwr
 21074 \let\sim\textnsim
 21075 \let\eqsim\texteqsim
 21076 \let\neqsim\textneqsim
 21077 \let\simeq\textsimeq
 21078 \let\nsimeq\textnsimeq
 21079 \let\cong\textcong
 21080 \let\ncong\textncong
 21081 \let\approx\textapprox
 21082 \let\napprox\textnapprox
 21083 \let\approxeq\textapproxeq
 21084 \let\napproxeq\textnapproxeq
 21085 \let\triplesim\texttriplesim
 21086 \let\ntriplesim\textntriplesim
 21087 \let\backcong\textbackcong
 21088 \let\nbackcong\textnbackcong
 21089 \let\asymp\textasymp
 21090 \let\nasymp\textnasymp
 21091 \let\Bumpeq\textBumpeq
 21092 \let\nBumpeq\textnBumpeq
 21093 \let\bumpeq\textbumpeq

21094 \let\nbumpeq\textnbumpeq
 21095 \let\doteq\textdoteq
 21096 \let\ndoteq\textndoteq
 21097 \let\doteqdot\textdoteqdot
 21098 \let\NDoteq\textNDoteq
 21099 \let\fallingdoteq\textfallingdoteq
 21100 \let\Nfallingdoteq\textNfallingdoteq
 21101 \let\risingdoteq\textrisingdoteq
 21102 \let\Nrisingdoteq\textNrisingdoteq
 21103 \let\colonequals\textcolonequals
 21104 \let\equalscolon\textequalscolon
 21105 \let\eqcirc\texteqcirc
 21106 \let\neqcirc\textneqcirc
 21107 \let\circeq\textcirceq
 21108 \let\ncirceq\textncirceq
 21109 \let\hateq\texthateq
 21110 \let\Nhateq\textNhateq
 21111 \let\triangleeq\texttriangleeq
 21112 \let\neq\textneq
 21113 \let\ne\textne
 21114 \let\equiv\textequiv
 21115 \let\nequiv\textnequiv
 21116 \let\leq\textleq
 21117 \let\le\textle
 21118 \let\geq\textgeq
 21119 \let\ge\textge
 21120 \let\leqq\textleqq
 21121 \let\leqq\textnleqq
 21122 \let\geqq\textgeqq
 21123 \let\geqq\textngeqq
 21124 \let\lneqq\textlneqq
 21125 \let\gneqq\textgneqq
 21126 \let\ll\textll
 21127 \let\nll\textnll
 21128 \let\gg\textgg
 21129 \let\ngg\textngg
 21130 \let\between\textbetween
 21131 \let\nless\textnless
 21132 \let\ngtr\textngtr
 21133 \let\leq\textnleq
 21134 \let\ngtr\textngeq
 21135 \let\lesssim\textlessim
 21136 \let\gtrsim\textgtrsim
 21137 \let\nlessim\textnlessim
 21138 \let\ngtrsim\textngtrsim
 21139 \let\lessgtr\textlessgtr
 21140 \let\gtrless\textgtrless
 21141 \let\ngtrless\textngtrless
 21142 \let\nlessgtr\textnlessgtr
 21143 \let\prec\textprec
 21144 \let\succ\textsucc
 21145 \let\preccurlyeq\textpreccurlyeq
 21146 \let\succcurlyeq\textsucccurlyeq
 21147 \let\precsim\textprecsim
 21148 \let\precnprec\textnprec
 21149 \let\succsim\textsuccsim
 21150 \let\nsuccsim\textnsuccsim

21151 `\let\nprec\textnprec`
 21152 `\let\nsucc\textnsucc`
 21153 `\let\subset\textsubset`
 21154 `\let\supset\textsupset`
 21155 `\let\nsubset\textnsubset`
 21156 `\let\nsupset\textnsupset`
 21157 `\let\subseteq\textsubseteq`
 21158 `\let\supseteq\textsupseteq`
 21159 `\let\nsubseteq\textnsubseq`
 21160 `\let\nsupseteq\textnsupseteq`
 21161 `\let\subsetneq\textsubsetneq`
 21162 `\let\supsetneq\textsupsetneq`
 21163 `\let\cupdot\textcupdot`
 21164 `\let\cupplus\textcupplus`
 21165 `\let\sqsubset\textsqsubset`
 21166 `\let\nsqsubset\textnsqsubset`
 21167 `\let\sqsupset\textsqsupset`
 21168 `\let\nsqsupset\textnsqsupset`
 21169 `\let\sqsubseq\textsqsubseq`
 21170 `\let\nsqsubseq\textnsqsubseq`
 21171 `\let\sqsupseq\textsqsupseq`
 21172 `\let\nsqsupseq\textnsqsupseq`
 21173 `\let\sqcap\textsqcap`
 21174 `\let\sqcup\textsqcup`
 21175 `\let\oplus\textoplus`
 21176 `\let\ominus\textominus`
 21177 `\let\otimes\textotimes`
 21178 `\let\oslash\textoslash`
 21179 `\let\odot\textodot`
 21180 `\let\circledcirc\textcircledcirc`
 21181 `\let\circledast\textcircledast`
 21182 `\let\circleddash\textcircleddash`
 21183 `\let\boxplus\textboxplus`
 21184 `\let\boxminus\textboxminus`
 21185 `\let\boxtimes\textboxtimes`
 21186 `\let\boxdot\textboxdot`
 21187 `\let\vdash\textvdash`
 21188 `\let\dashv\textdashv`
 21189 `\let\ndashv\textndashv`
 21190 `\let\top\texttop`
 21191 `\let\ndownvdash\textndownvdash`
 21192 `\let\bot\textbot`
 21193 `\let\nupvdash\textnupvdash`
 21194 `\let\vDash\textvDash`
 21195 `\let\Vdash\textVdash`
 21196 `\let\Vvdash\textVvdash`
 21197 `\let\NVdash\textNVdash`
 21198 `\let\VDash\textVDash`
 21199 `\let\Nvdash\textNvdash`
 21200 `\let\NVDash\textNVDash`
 21201 `\let\NVdash\textNVdash`
 21202 `\let\NVDash\textNVDash`
 21203 `\let\lhd\textlhd`
 21204 `\let\rhd\textrhd`
 21205 `\let\unlhd\textunlhd`
 21206 `\let\unrhd\textunrhd`
 21207 `\let\multimapdotbothA\textmultimapdotbothA`

21208 `\let\multimapdotbothB\textmultimapdotbothB`
 21209 `\let\multimap\textmultimap`
 21210 `\let\veebar\textveebar`
 21211 `\let\barwedge\textbarwedge`
 21212 `\let\star\textstar`
 21213 `\let\divideontimes\textdivideontimes`
 21214 `\let\bowtie\textbowtie`
 21215 `\let\ltimes\textltimes`
 21216 `\let\rtimes\textrtimes`
 21217 `\let\leftthreetimes\textleftthreetimes`
 21218 `\let\rightthreetimes\textrightthreetimes`
 21219 `\let\backsimeq\textbacksimeq`
 21220 `\let\nbacksimeq\textnbacksimeq`
 21221 `\let\curlyvee\textcurlyvee`
 21222 `\let\curlywedge\textcurlywedge`
 21223 `\let\Subset\textSubset`
 21224 `\let\nSubset\textnSubset`
 21225 `\let\Supset\textSupset`
 21226 `\let\nSupset\textnSupset`
 21227 `\let\Cap\textCap`
 21228 `\let\Cup\textCup`
 21229 `\let\pitchfork\textpitchfork`
 21230 `\let\lessdot\textlessdot`
 21231 `\let\gtrdot\textgtrdot`
 21232 `\let\lll\textlll`
 21233 `\let\ggg\textggg`
 21234 `\let\lesseqgtr\textlesseqgtr`
 21235 `\let\gtreqless\textgtreqless`
 21236 `\let\curlyeqprec\textcurlyeqprec`
 21237 `\let\ncurlyeqprec\textncurlyeqprec`
 21238 `\let\curlyeqsucc\textcurlyeqsucc`
 21239 `\let\ncurlyeqsucc\textncurlyeqsucc`
 21240 `\let\npreccurlyeq\textnpreccurlyeq`
 21241 `\let\nsucccurlyeq\textnsucccurlyeq`
 21242 `\let\nqsubseteq\textnqsubseteq`
 21243 `\let\nqsupseteq\textnqsupseteq`
 21244 `\let\sqsubsetneq\textsqsubsetneq`
 21245 `\let\sqsupsetneq\textsqsupsetneq`
 21246 `\let\lnsim\textlnsim`
 21247 `\let\gnsim\textgnsim`
 21248 `\let\precnsim\textprecnsim`
 21249 `\let\succnsim\textsuccnsim`
 21250 `\let\ntriangleleft\textntriangleleft`
 21251 `\let\ntriangleright\textntriangleright`
 21252 `\let\ntrianglelefteq\textntrianglelefteq`
 21253 `\let\ntrianglerighteq\textntrianglerighteq`
 21254 `\let\vdots\textvdots`
 21255 `\let\cdots\textcdots`
 21256 `\let\udots\textudots`
 21257 `\let\ddots\textddots`
 21258 `\let\barin\textbarin`
 21259 `\let\diameter\textdiameter`
 21260 `\let\backneg\textbackneg`
 21261 `\let\wasylounge\textwasylounge`
 21262 `\let\invbackneg\textinvbackneg`
 21263 `\let\clock\textclock`
 21264 `\let\ulcorner\textulcorner`

21265 \let\urcorner\texturcorner
 21266 \let\llcorner\textllcorner
 21267 \let\lrcorner\textlrcorner
 21268 \let\frown\textfrown
 21269 \let\smile\textsmile
 21270 \let\Keyboard\textKeyboard
 21271 \let\langle\textlangle
 21272 \let\rangle\textrangle
 21273 \let\APLinv\textAPLinv
 21274 \let\Tumbler\textTumbler
 21275 \let\notslash\textnotslash
 21276 \let\notbackslash\textnotbackslash
 21277 \let\boxbackslash\textboxbackslash
 21278 \let\APLleftarrowbox\textAPLleftarrowbox
 21279 \let\APLrightarrowbox\textAPLrightarrowbox
 21280 \let\APLuparrowbox\textAPLuparrowbox
 21281 \let\APLdownarrowbox\textAPLdownarrowbox
 21282 \let\APLinput\textAPLinput
 21283 \let\Request\textRequest
 21284 \let\Beam\textBeam
 21285 \let\hexagon\texthexagon
 21286 \let\APLbox\textAPLbox
 21287 \let\ForwardToIndex\textForwardToIndex
 21288 \let\RewindToIndex\textRewindToIndex
 21289 \let\bbslash\textbbslash
 21290 \let\CircledA\textCircledA
 21291 \let\CleaningF\textCleaningF
 21292 \let\CleaningFF\textCleaningFF
 21293 \let\CleaningP\textCleaningP
 21294 \let\CleaningPP\textCleaningPP
 21295 \let\CuttingLine\textCuttingLine
 21296 \let\UParrow\textUParrow
 21297 \let\bigtriangleup\textbigtriangleup
 21298 \let\Forward\textForward
 21299 \let\triangleright\texttriangleright
 21300 \let\RHD\textRHD
 21301 \let\DOWNarrow\textDOWNarrow
 21302 \let\bigtriangledown\textbigtriangledown
 21303 \let\Rewind\textRewind
 21304 \let\triangleleft\texttriangleleft
 21305 \let\LHD\textLHD
 21306 \let\diamond\textdiamond
 21307 \let\lozenge\textlozenge
 21308 \let\LEFTCIRCLE\textLEFTCIRCLE
 21309 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21310 \let\openbullet\textopenbullet
 21311 \let\boxbar\textboxbar
 21312 \let\bigcircle\textbigcircle
 21313 \let\Cloud\textCloud
 21314 \let\FiveStar\textFiveStar
 21315 \let\FiveStarOpen\textFiveStarOpen
 21316 \let\Phone\textPhone
 21317 \let\boxempty\textboxempty
 21318 \let\Checkedbox\textCheckedbox
 21319 \let\Crossedbox\textCrossedbox
 21320 \let\Coffeecup\textCoffeecup
 21321 \let\HandCuffLeft\textHandCuffLeft

21322 \let\HandCuffRight\textHandCuffRight
 21323 \let\HandLeft\textHandLeft
 21324 \let\HandRight\textHandRight
 21325 \let\Radioactivity\textRadioactivity
 21326 \let\Biohazard\textBiohazard
 21327 \let\Ankh\textAnkh
 21328 \let\YinYang\textYinYang
 21329 \let\frownie\textfrownie
 21330 \let\smiley\textsmiley
 21331 \let\blacksmiley\textblacksmiley
 21332 \let\sun\textsun
 21333 \let\leftmoon\textleftmoon
 21334 \let\rightmoon\textrightmoon
 21335 \let\mercury\textmercury
 21336 \let\earth\textearth
 21337 \let\male\textmale
 21338 \let\jupiter\textjupiter
 21339 \let\saturn\textsaturn
 21340 \let\uranus\texturanus
 21341 \let\neptune\textneptune
 21342 \let\pluto\textpluto
 21343 \let\aries\textaries
 21344 \let\taurus\texttaurus
 21345 \let\gemini\textgemini
 21346 \let\cancer\textcancer
 21347 \let\leo\textleo
 21348 \let\virgo\textvirgo
 21349 \let\libra\textlibra
 21350 \let\scorpio\textscorpio
 21351 \let\sagittarius\textsagittarius
 21352 \let\capricornus\textcapricornus
 21353 \let\aquarius\textaquarius
 21354 \let\pisces\textpisces
 21355 \let\quarternote\textquarternote
 21356 \let\twonotes\texttwonotes
 21357 \let\sixteenthnote\textsixteenthnote
 21358 \let\flat\textflat
 21359 \let\natural\textnatural
 21360 \let\sharp\textsharp
 21361 \let\recycle\textrecycle
 21362 \let\Wheelchair\textWheelchair
 21363 \let\Flag\textFlag
 21364 \let\MineSign\textMineSign
 21365 \let\ds military\textds military
 21366 \let\ds medical\textds medical
 21367 \let\ds juridical\textds juridical
 21368 \let\ds chemical\textds chemical
 21369 \let\ds biological\textds biological
 21370 \let\ds commercial\textds commercial
 21371 \let\manstar\textmanstar
 21372 \let\danger\textdanger
 21373 \let\FemaleFemale\textFemaleFemale
 21374 \let\MaleMale\textMaleMale
 21375 \let\FemaleMale\textFemaleMale
 21376 \let\Hermaphrodite\textHermaphrodite
 21377 \let\Neutral\textNeutral
 21378 \let\hexstar\texthexstar

21379 \let\SunCloud\textSunCloud
 21380 \let\Rain\textRain
 21381 \let\noway\textnoway
 21382 \let\Mountain\textMountain
 21383 \let\Tent\textTent
 21384 \let\ScissorRight\textScissorRight
 21385 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21386 \let\ScissorHollowRight\textScissorHollowRight
 21387 \let\PhoneHandset\textPhoneHandset
 21388 \let\Tape\textTape
 21389 \let\Plane\textPlane
 21390 \let\Envelope\textEnvelope
 21391 \let\Peace\textPeace
 21392 \let\WritingHand\textWritingHand
 21393 \let\PencilRightDown\textPencilRightDown
 21394 \let\PencilRight\textPencilRight
 21395 \let\PencilRightUp\textPencilRightUp
 21396 \let\NibRight\textNibRight
 21397 \let\NibSolidRight\textNibSolidRight
 21398 \let\Checkmark\textCheckmark
 21399 \let\CheckmarkBold\textCheckmarkBold
 21400 \let\XSolid\textXSolid
 21401 \let\XSolidBold\textXSolidBold
 21402 \let\XSolidBrush\textXSolidBrush
 21403 \let\PlusOutline\textPlusOutline
 21404 \let\Plus\textPlus
 21405 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21406 \let\PlusCenterOpen\textPlusCenterOpen
 21407 \let\Cross\textCross
 21408 \let\CrossOpenShadow\textCrossOpenShadow
 21409 \let\CrossOutline\textCrossOutline
 21410 \let\CrossMaltese\textCrossMaltese
 21411 \let\DavidStar\textDavidStar
 21412 \let\FourAsterisk\textFourAsterisk
 21413 \let\JackStar\textJackStar
 21414 \let\JackStarBold\textJackStarBold
 21415 \let\ClowerTips\textClowerTips
 21416 \let\FourStar\textFourStar
 21417 \let\FourStarOpen\textFourStarOpen
 21418 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21419 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21420 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21421 \let\FiveStarOutline\textFiveStarOutline
 21422 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21423 \let\FiveStarConvex\textFiveStarConvex
 21424 \let\FiveStarShadow\textFiveStarShadow
 21425 \let\AsteriskBold\textAsteriskBold
 21426 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21427 \let\EightStarTaper\textEightStarTaper
 21428 \let\EightStarConvex\textEightStarConvex
 21429 \let\SixStar\textSixStar
 21430 \let\EightStar\textEightStar
 21431 \let\EightStarBold\textEightStarBold
 21432 \let\TwelveStar\textTwelveStar
 21433 \let\SixteenStarLight\textSixteenStarLight
 21434 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21435 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter

21436 \let\Asterisk\textAsterisk
 21437 \let\SixFlowerAlternate\textSixFlowerAlternate
 21438 \let\FiveFlowerPetal\textFiveFlowerPetal
 21439 \let\FiveFlowerOpen\textFiveFlowerOpen
 21440 \let\EightFlowerPetal\textEightFlowerPetal
 21441 \let\SunshineOpenCircled\textSunshineOpenCircled
 21442 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21443 \let\SnowflakeChevron\textSnowflakeChevron
 21444 \let\Snowflake\textSnowflake
 21445 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21446 \let\Sparkle\textSparkle
 21447 \let\SparkleBold\textSparkleBold
 21448 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21449 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21450 \let\EightAsterisk\textEightAsterisk
 21451 \let\CircleShadow\textCircleShadow
 21452 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21453 \let\SquareTopRight\textSquareTopRight
 21454 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21455 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21456 \let\DiamandSolid\textDiamandSolid
 21457 \let\RectangleThin\textRectangleThin
 21458 \let\Rectangle\textRectangle
 21459 \let\RectangleBold\textRectangleBold
 21460 \let\perp\textperp
 21461 \let\notperp\textnotperp
 21462 \let\veedot\textveedot
 21463 \let\wedgedot\textwedgedot
 21464 \let\leftspoon\textleftspoon
 21465 \let\lbrackdbl\textlbrackdbl
 21466 \let\rbrackdbl\textrbrackdbl
 21467 \let\circlearrowleft\textcirclearrowleft
 21468 \let\circlearrowright\textcirclearrowright
 21469 \let\longleftarrow\textlongleftarrow
 21470 \let\longrightarrow\textlongrightarrow
 21471 \let\longleftarrow\textlongleftarrow
 21472 \let\Longleftarrow\textLongleftarrow
 21473 \let\Longrightarrow\textLongrightarrow
 21474 \let\Longleftarrow\textLongleftarrow
 21475 \let\longmapsto\textlongmapsto
 21476 \let\Longmapsfrom\textLongmapsfrom
 21477 \let\Longmapsto\textLongmapsto
 21478 \let\nwsearrow\textnwsearrow
 21479 \let\neswarrow\textneswarrow
 21480 \let\lhooknarrow\textlhooknarrow
 21481 \let\rhooknarrow\texthooknarrow
 21482 \let\lhooksearrow\textlhooksearrow
 21483 \let\rhooksearrow\texthooksearrow
 21484 \let\leadsto\textleadsto
 21485 \let\rcurvearrowne\textrcurvearrowne
 21486 \let\lcurvearrowse\textlcurvearrowse
 21487 \let\lcurvearrowsw\textlcurvearrowsw
 21488 \let\rcurvearrowse\textrcurvearrowse
 21489 \let\lcurvearrowdown\textlcurvearrowdown
 21490 \let\rcurvearrowdown\textrcurvearrowdown
 21491 \let\rcurvearrowleft\textrcurvearrowleft
 21492 \let\rcurvearrowright\textrcurvearrowright

21493 $\backslash\text{leftrightharpoon}\backslash\text{textleftrightharpoon}$
 21494 $\backslash\text{rightleftharpoon}\backslash\text{textrightleftharpoon}$
 21495 $\backslash\text{updownharpoonrightleft}\backslash\text{textupdownharpoonrightleft}$
 21496 $\backslash\text{updownharpoonleftright}\backslash\text{textupdownharpoonleftright}$
 21497 $\backslash\text{leftleftharpoons}\backslash\text{textleftleftharpoons}$
 21498 $\backslash\text{upupharpoons}\backslash\text{textupupharpoons}$
 21499 $\backslash\text{rightrightarpoons}\backslash\text{textrighttrightarpoons}$
 21500 $\backslash\text{downdownharpoons}\backslash\text{textdowndownharpoons}$
 21501 $\backslash\text{leftbarharpoon}\backslash\text{textleftbarharpoon}$
 21502 $\backslash\text{barleftharpoon}\backslash\text{textbarleftharpoon}$
 21503 $\backslash\text{rightbarharpoon}\backslash\text{textrightbarharpoon}$
 21504 $\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 21505 $\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 21506 $\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 21507 $\backslash\text{moo}\backslash\text{textmoo}$
 21508 $\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 21509 $\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 21510 $\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 21511 $\backslash\text{oobar}\backslash\text{textobar}$
 21512 $\backslash\text{obslash}\backslash\text{textobslash}$
 21513 $\backslash\text{obot}\backslash\text{textobot}$
 21514 $\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 21515 $\backslash\text{olessthan}\backslash\text{textolessthan}$
 21516 $\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 21517 $\backslash\text{boxslash}\backslash\text{textboxslash}$
 21518 $\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 21519 $\backslash\text{boxast}\backslash\text{textboxast}$
 21520 $\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 21521 $\backslash\text{boxbox}\backslash\text{textboxbox}$
 21522 $\backslash\text{Valve}\backslash\text{textValve}$
 21523 $\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 21524 $\backslash\text{shuffle}\backslash\text{textshuffle}$
 21525 $\backslash\text{uplus}\backslash\text{textuplus}$
 21526 $\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 21527 $\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 21528 $\backslash\text{Join}\backslash\text{textJoin}$
 21529 $\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 21530 $\backslash\text{circplus}\backslash\text{textcircplus}$
 21531 $\backslash\text{minusdot}\backslash\text{textminusdot}$
 21532 $\backslash\text{dotimes}\backslash\text{textdotimes}$
 21533 $\backslash\text{dtimes}\backslash\text{textdtimes}$
 21534 $\backslash\text{odiv}\backslash\text{textodiv}$
 21535 $\backslash\text{invneg}\backslash\text{textinvneg}$
 21536 $\backslash\text{sqdoublecap}\backslash\text{textsquaddoublecap}$
 21537 $\backslash\text{capdot}\backslash\text{textcapdot}$
 21538 $\backslash\text{sqdoublecup}\backslash\text{textsquaddoublecup}$
 21539 $\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 21540 $\backslash\text{doublevee}\backslash\text{textdoublevee}$
 21541 $\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 21542 $\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 21543 $\backslash\text{eqdot}\backslash\text{texteqdot}$
 21544 $\backslash\text{neqdot}\backslash\text{textneqdot}$
 21545 $\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 21546 $\backslash\text{leqslant}\backslash\text{textleqslant}$
 21547 $\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 21548 $\backslash\text{geqslant}\backslash\text{textgeqslant}$
 21549 $\backslash\text{ngeqslant}\backslash\text{textngeqslant}$

21550 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 21551 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 21552 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 21553 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 21554 $\backslash\text{let}\backslash\text{lneq}\backslash\text{textlneq}$
 21555 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 21556 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 21557 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 21558 $\backslash\text{let}\backslash\text{lesseqqgtr}\backslash\text{textlesseqqgtr}$
 21559 $\backslash\text{let}\backslash\text{gtreqqless}\backslash\text{textgtreqqless}$
 21560 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{texteqslantless}$
 21561 $\backslash\text{let}\backslash\text{eqslantgtr}\backslash\text{texteqslantgtr}$
 21562 $\backslash\text{let}\backslash\text{leftslice}\backslash\text{textleftslice}$
 21563 $\backslash\text{let}\backslash\text{rightslice}\backslash\text{textrightslice}$
 21564 $\backslash\text{let}\backslash\text{preceq}\backslash\text{textpreceq}$
 21565 $\backslash\text{let}\backslash\text{npreceq}\backslash\text{textnpreceq}$
 21566 $\backslash\text{let}\backslash\text{succeq}\backslash\text{textsucceq}$
 21567 $\backslash\text{let}\backslash\text{nsucceq}\backslash\text{textnsucceq}$
 21568 $\backslash\text{let}\backslash\text{precneq}\backslash\text{textprecneq}$
 21569 $\backslash\text{let}\backslash\text{succneq}\backslash\text{textsuccneq}$
 21570 $\backslash\text{let}\backslash\text{preceqq}\backslash\text{textpreceqq}$
 21571 $\backslash\text{let}\backslash\text{npreceqq}\backslash\text{textnpreceqq}$
 21572 $\backslash\text{let}\backslash\text{succeqq}\backslash\text{textsucceqq}$
 21573 $\backslash\text{let}\backslash\text{nsucceqq}\backslash\text{textnsucceqq}$
 21574 $\backslash\text{let}\backslash\text{precneqq}\backslash\text{textprecneqq}$
 21575 $\backslash\text{let}\backslash\text{succneqq}\backslash\text{textsuccneqq}$
 21576 $\backslash\text{let}\backslash\text{precapprox}\backslash\text{textprecapprox}$
 21577 $\backslash\text{let}\backslash\text{nprecapprox}\backslash\text{textnprecapprox}$
 21578 $\backslash\text{let}\backslash\text{succapprox}\backslash\text{textsuccapprox}$
 21579 $\backslash\text{let}\backslash\text{nsuccapprox}\backslash\text{textnsuccapprox}$
 21580 $\backslash\text{let}\backslash\text{precnapprox}\backslash\text{textprecnapprox}$
 21581 $\backslash\text{let}\backslash\text{succnapprox}\backslash\text{textsuccnapprox}$
 21582 $\backslash\text{let}\backslash\text{subsepeq}\backslash\text{textsubsepeq}$
 21583 $\backslash\text{let}\backslash\text{nsubsepeq}\backslash\text{textnsubsepeq}$
 21584 $\backslash\text{let}\backslash\text{supsepeq}\backslash\text{textsupsepeq}$
 21585 $\backslash\text{let}\backslash\text{nsupsepeq}\backslash\text{textnsupsepeq}$
 21586 $\backslash\text{let}\backslash\text{dashV}\backslash\text{textdashV}$
 21587 $\backslash\text{let}\backslash\text{ndashV}\backslash\text{textndashV}$
 21588 $\backslash\text{let}\backslash\text{Dashv}\backslash\text{textDashv}$
 21589 $\backslash\text{let}\backslash\text{nDashv}\backslash\text{textnDashv}$
 21590 $\backslash\text{let}\backslash\text{DashV}\backslash\text{textDashV}$
 21591 $\backslash\text{let}\backslash\text{nDashV}\backslash\text{textnDashV}$
 21592 $\backslash\text{let}\backslash\text{downmodels}\backslash\text{textdownmodels}$
 21593 $\backslash\text{let}\backslash\text{ndownmodels}\backslash\text{textndownmodels}$
 21594 $\backslash\text{let}\backslash\text{upmodels}\backslash\text{textupmodels}$
 21595 $\backslash\text{let}\backslash\text{nupmodels}\backslash\text{textnupmodels}$
 21596 $\backslash\text{let}\backslash\text{upspoon}\backslash\text{textupspoon}$
 21597 $\backslash\text{let}\backslash\text{interleave}\backslash\text{textinterleave}$
 21598 $\backslash\text{let}\backslash\text{slash}\backslash\text{textslash}$
 21599 $\backslash\text{let}\backslash\text{pentagon}\backslash\text{textpentagon}$
 21600 $\backslash\text{let}\backslash\text{varhexagon}\backslash\text{textvarhexagon}$
 21601 $\backslash\text{let}\backslash\text{jinferior}\backslash\text{textjinferior}$
 21602 $\backslash\text{let}\backslash\text{slashdiv}\backslash\text{textslashdiv}$
 21603 $\backslash\text{let}\backslash\text{fivedots}\backslash\text{textfivedots}$
 21604 $\backslash\text{let}\backslash\text{oo}\backslash\text{textoo}$
 21605 $\backslash\text{let}\backslash\text{GaPa}\backslash\text{textGaPa}$
 21606 $\backslash\text{let}\backslash\text{HaPa}\backslash\text{textHaPa}$

21607 \let\ViPa\textViPa
 21608 \let\AcPa\textAcPa
 21609 \let\SePa\textSePa
 21610 \let\ZwPa\textZwPa
 21611 \let\fullnote\textfullnote
 21612 \let\halfnote\texthalfnote
 21613 \let\Vier\textVier
 21614 \let\Acht\textAcht
 21615 \let\Sech\textSech
 21616 \let\Zwdr\textZwdr
 21617 \let\Mundus\textMundus
 21618 \let\Moon\textMoon
 21619 \let\ManFace\textManFace
 21620 \let\WomanFace\textWomanFace
 21621 \let\Fax\textFax
 21622 \let\Fire\textFire
 21623 \let\Bicycle\textBicycle
 21624 \let\Gentsroom\textGentsroom
 21625 \let\Ladiesroom\textLadiesroom
 21626 \let\ccnc\textccnc
 21627 \let\ccsa\textccsa
 21628 \let\Info\textInfo
 21629 \let\CESign\textCESign
 21630 \let\neg\textneg
 21631 \let\times\texttimes
 21632 \let\div\textdiv
 21633 \let\pm\textpm
 21634 \let\cdot\textcdot
 21635 }% \psdmapshortnames
 21636 \newcommand*{\psdaliasnames}{%
 21637 \let\epsdice\HyPsd@DieFace
 21638 \let\fcdice\HyPsd@DieFace
 21639 \let\MoonPha\HyPsd@MoonPha
 21640 \let\mathdollar\textdollar
 21641 \let\EyesDollar\textdollar
 21642 \let\binampersand\textampersand
 21643 \let\with\textampersand
 21644 \let\mathunderscore\textunderscore
 21645 \let\textvertline\textbar
 21646 \let\mathsterling\textsterling
 21647 \let\pounds\textsterling
 21648 \let\brokenvert\textbrokenbar
 21649 \let\mathsection\textsection
 21650 \let\S\textsection
 21651 \let\mathparagraph\textparagraph
 21652 \let\MultiplicationDot\textperiodcentered
 21653 \let\Squaredot\textperiodcentered
 21654 \let\vartimes\textmultiply
 21655 \let\MVMultiplication\textmultiply
 21656 \let\eth\dh
 21657 \let\crossd\textcrd
 21658 \let\textbard\textcrd
 21659 \let\bard\textcrd
 21660 \let\textcrh\textthbar
 21661 \let\crossh\textthbar
 21662 \let\planck\textthbar
 21663 \let\eng\ng

21664 \let\engma\ng
 21665 \let\crossb\textcrb
 21666 \let\textbarb\textcrb
 21667 \let\barb\textcrb
 21668 \let\Florin\textflorin
 21669 \let\hv\texthvlig
 21670 \let\hausak\texthtk
 21671 \let\crossnilambda\textcrlambda
 21672 \let\barlambda\textcrlambda
 21673 \let\lambdabar\textcrlambda
 21674 \let\lambdaslash\textcrlambda
 21675 \let\textnrleg\textPUnrleg
 21676 \let\textpipevar\textpipe
 21677 \let\textdoublepipevar\textdoublepipe
 21678 \let\textdoublebarpipevar\textdoublebarpipe
 21679 \let\textcrg\textgslash
 21680 \let\textdblig\textPUdblig
 21681 \let\textqplig\textPUqplig
 21682 \let\textcentoldstyle\textslashc
 21683 \let\textbarc\textslashc
 21684 \let\inva\textturna
 21685 \let\vara\textscripta
 21686 \let\invscripta\textturnscripta
 21687 \let\rotvara\textturnscripta
 21688 \let\hookb\texthtb
 21689 \let\hausab\texthtb
 21690 \let\varopeno\textopeno
 21691 \let\curlyc\textctc
 21692 \let\taild\textrtaild
 21693 \let\hookd\texthtd
 21694 \let\hausad\texthtd
 21695 \let\er\textrhooschwa
 21696 \let\epsi\textniepsilon
 21697 \let\hookrepsilon\textrhooschwa
 21698 \let\closedrepsilon\textcloserepsilon
 21699 \let\barj\textbardotlessj
 21700 \let\hookg\texthtg
 21701 \let\varg\textscriptg
 21702 \let\vod\textipagamma
 21703 \let\invh\textturnh
 21704 \let\udesc\textturnh
 21705 \let\hookh\textthh
 21706 \let\voicedh\textthh
 21707 \let\hookheng\textthheng
 21708 \let\ibar\textbari
 21709 \let\vari\textniota
 21710 \let\tildel\texttilde
 21711 \let\latfric\textbeltl
 21712 \let\tail\textrtail
 21713 \let\lz\textlyoghlig
 21714 \let\invm\textturnm
 21715 \let\rotm\textturnm
 21716 \let\legm\textturnmrleg
 21717 \let\labdentals\textiltailm
 21718 \let\emgma\textiltailm
 21719 \let\nj\textiltailn
 21720 \let\enya\textiltailn

21721 \let\tailn\textrtailn
 21722 \let\closedniomega\textcloseomega
 21723 \let\varomega\textcloseomega
 21724 \let\invr\textturnr
 21725 \let\rotr\textturnr
 21726 \let\invlegr\textturnlonglegr
 21727 \let\tailinvr\textturnrrtail
 21728 \let\legr\textlonglegr
 21729 \let\tailr\textrtailr
 21730 \let\flapr\textfishhookr
 21731 \let\flap\textfishhookr
 21732 \let\tails\textrtails
 21733 \let\curlyesh\textctesh
 21734 \let\clickt\textturnt
 21735 \let\tailt\textrtailt
 21736 \let\ubar\textbaru
 21737 \let\rotOmega\textniupsilon
 21738 \let\invv\textturnv
 21739 \let\pwedge\textturnv
 21740 \let\invw\textturnw
 21741 \let\rotw\textturnw
 21742 \let\invy\textturny
 21743 \let\roty\textturny
 21744 \let\tailz\textrtailz
 21745 \let\curlyz\textctz
 21746 \let\curlyyogh\textctyogh
 21747 \let\ejective\textglotstop
 21748 \let\glottal\textglotstop
 21749 \let\reveject\textrevglotstop
 21750 \let\clickc\textstretchc
 21751 \let\textstretchcvar\textstretchc
 21752 \let\clickb\textbullseye
 21753 \let\textObullseye\textbullseye
 21754 \let\textctjvar\textctj
 21755 \let\textturnsck\textturnk
 21756 \let\dz\textdzlig
 21757 \let\tesh\textteshlig
 21758 \let\digamma\textdigammagreek
 21759 \let\hardsign\cyrhrdsn
 21760 \let\softsign\cyrsoftsn
 21761 \let\hebsin\hebshin
 21762 \let\textsck\textPUscck
 21763 \let\textscm\textPUscm
 21764 \let\textscp\textPUscp
 21765 \let\textrevscr\textPUrevscr
 21766 \let\textrhooka\textPUrhooka
 21767 \let\textrhooke\textPUrhooke
 21768 \let\textrhookepsilon\textPUrhookepsilon
 21769 \let\textrhookopeno\textPUrhookopeno
 21770 \let\textdoublevertline\textbardbl
 21771 \let\dag\textdagger
 21772 \let\ddagger\textdaggerdbl
 21773 \let\ddag\textdaggerdbl
 21774 \let\mathellipsis\textellipsis
 21775 \let\EurDig\texteuro
 21776 \let\EURdig\texteuro
 21777 \let\EurHv\texteuro

21778 \let\EURhv\texteuro
 21779 \let\EurCr\texteuro
 21780 \let\EURcr\texteuro
 21781 \let\EurTm\texteuro
 21782 \let\EURtm\texteuro
 21783 \let\Eur\texteuro
 21784 \let\Denarius\textDeleatur
 21785 \let\agemO\textmho
 21786 \let\EstimatedSign\textestimated
 21787 \let\Ecommerce\textestimated
 21788 \let\bindnasrepma\textinvamp
 21789 \let\parr\textinvamp
 21790 \let\MVRightArrow\textrightarrow
 21791 \let\MVRightarrow\textrightarrow
 21792 \let\MVArrowDown\textdownarrow
 21793 \let\Force\textdownarrow
 21794 \let\textglobrise\textnearrow
 21795 \let\textglobfall\textsearrow
 21796 \let\Lightning\textlightning
 21797 \let\Conclusion\textRightarrow
 21798 \let\dashedleftarrow\textdashleftarrow
 21799 \let\dashedrightarrow\textdashrightarrow
 21800 \let\varnothing\textemptyset
 21801 \let\owns\textni
 21802 \let\notni\textnotowner
 21803 \let\varprop\textpropto
 21804 \let\varangle\textsphericalangle
 21805 \let\Anglesign\textsphericalangle
 21806 \let\AngleSign\textsphericalangle
 21807 \let\notdivides\textnmid
 21808 \let\varowedge\textowedge
 21809 \let\varovee\textovee
 21810 \let\varint\textint
 21811 \let\varoint\textoint
 21812 \let\downtherefore\textbecause
 21813 \let\textdotdiv\textdotminus
 21814 \let\AC\textsim
 21815 \let\wreath\textwr
 21816 \let\nthickapprox\textnapprox
 21817 \let\VHF\texttriplesim
 21818 \let\notasymp\textnasyp
 21819 \let\Doteq\textdoteqdot
 21820 \let\corresponds\texthateq
 21821 \let\Corresponds\texthateq
 21822 \let\nequal\textneq
 21823 \let\Congruent\textequiv
 21824 \let\NotCongruent\textnequiv
 21825 \let\notequiv\textnequiv
 21826 \let\LessOrEqual\textleq
 21827 \let\LargerOrEqual\textgeq
 21828 \let\apprle\textlesssim
 21829 \let\apprge\textgtrsim
 21830 \let\varoplus\textoplus
 21831 \let\varominus\textominus
 21832 \let\varotimes\textotimes
 21833 \let\varoslash\textoslash
 21834 \let\varodot\textodot

21835 \let\ocirc\textcircledcirc
 21836 \let\varocircle\textcircledcirc
 21837 \let\varoast\textcircledast
 21838 \let\oasterisk\textcircledast
 21839 \let\rightvdash\textvdash
 21840 \let\leftvdash\textdashv
 21841 \let\nleftvdash\textndashv
 21842 \let\downvdash\texttop
 21843 \let\upvdash\textbot
 21844 \let\nperp\textnupvdash
 21845 \let\models\textvDash
 21846 \let\rightmodels\textvDash
 21847 \let\rightVdash\textVdash
 21848 \let\rightModels\textVDash
 21849 \let\nrightvdash\textnvdash
 21850 \let\nrightmodels\textnvDash
 21851 \let\nmodels\textnvDash
 21852 \let\nrightVdash\textnVdash
 21853 \let\nrightModels\textnVDash
 21854 \let\lessclosed\textlhd
 21855 \let\gtrclosed\textrhd
 21856 \let\leqclosed\textunlhd
 21857 \let\trianglelefteq\textunlhd
 21858 \let\geqclosed\textunrhd
 21859 \let\trianglerighteq\textunrhd
 21860 \let\Bowtie\textbowtie
 21861 \let\varcurlyvee\textcurlyvee
 21862 \let\varcurlywedge\textcurlywedge
 21863 \let\doublecap\textCap
 21864 \let\doublecup\textCup
 21865 \let\varsqsubsetneq\textsqsubsetneq
 21866 \let\varsqsupsetneq\textsqsupsetneq
 21867 \let\nlessclosed\textntriangleleft
 21868 \let\ngtrclosed\textntriangleright
 21869 \let\Clocklogo\textclock
 21870 \let\ClockLogo\textclock
 21871 \let\baro\textstmaryrdbaro
 21872 \let\varparallelinv\textbbslash
 21873 \let\CleaningA\textCircledA
 21874 \let\Kutline\textCuttingLine
 21875 \let\CutLine\textCuttingLine
 21876 \let\Cutline\textCuttingLine
 21877 \let\MoveUp\textUParrow
 21878 \let\APLup\textbigtriangleup
 21879 \let\Bleech\textbigtriangleup
 21880 \let\MoveDown\textDOWNarrow
 21881 \let\APLdown\textbigtriangledown
 21882 \let\Diamond\textdiamond
 21883 \let\varbigcirc\textbigcircle
 21884 \let\Telefon\textPhone
 21885 \let\Box\textboxempty
 21886 \let\CheckedBox\textCheckedbox
 21887 \let\XBox\textCrossedbox
 21888 \let\CrossedBox\textCrossedbox
 21889 \let\rightpointleft\textHandLeft
 21890 \let\leftpointright\textHandRight
 21891 \let\PointingHand\textHandRight

21892 \let\Pointinghand\textHandRight
 21893 \let\Radiation\textRadioactivity
 21894 \let\Yinyang\textYinYang
 21895 \let\YingYang\textYinYang
 21896 \let\Yingyang\textYinYang
 21897 \let\Frowny\textfrownie
 21898 \let\Smiley\textsmiley
 21899 \let\Sun\textsun
 21900 \let\Mercury\textmercury
 21901 \let\textfemale\textPUfemale
 21902 \let\female\textPUfemale
 21903 \let\venus\textPUfemale
 21904 \let\Venus\textPUfemale
 21905 \let\Female\textPUfemale
 21906 \let\Earth\textearth
 21907 \let\mars\textmale
 21908 \let\Mars\textmale
 21909 \let\Male\textmale
 21910 \let\Jupiter\textjupiter
 21911 \let\Saturn\textsaturn
 21912 \let\Uranus\texturanus
 21913 \let\Neptune\textneptune
 21914 \let\Pluto\textpluto
 21915 \let\Aries\textaries
 21916 \let\Taurus\texttaurus
 21917 \let\Gemini\textgemini
 21918 \let\Cancer\textcancer
 21919 \let\Leo\textleo
 21920 \let\Virgo\textvirgo
 21921 \let\Libra\textlibra
 21922 \let\Scorpio\textscorpio
 21923 \let\Sagittarius\textsagittarius
 21924 \let\Capricorn\textcapricornus
 21925 \let\Aquarius\textaquarius
 21926 \let\Pisces\textpisces
 21927 \let\spadesuit\textspadesuitblack
 21928 \let\Heart\textheartsuitwhite
 21929 \let\heartsuit\textheartsuitwhite
 21930 \let\diamondsuit\textdiamondsuitwhite
 21931 \let\clubsuit\textclubsuitblack
 21932 \let\ eighthnote\textmusicalnote
 21933 \let\Recycling\textrecycle
 21934 \let\VarFlag\textFlag
 21935 \let\textxswup\textdsimilitary
 21936 \let\textuncrfemale\textPUuncrfemale
 21937 \let\Football\textSoccerBall
 21938 \let\CutLeft\textScissorRightBrokenBottom
 21939 \let\Cutright\textScissorRightBrokenBottom
 21940 \let\RightScissors\textScissorRight
 21941 \let\Leftscissors\textScissorRight
 21942 \let\Letter\textEnvelope
 21943 \let\Writinghand\textWritingHand
 21944 \let\checkmark\textCheckmark
 21945 \let\DavidStar\textDavidStar
 21946 \let\llbracket\textlbrackdbl
 21947 \let\rrbracket\textrrbrackdbl
 21948 \let\RightTorque\textlcurvearrowdown

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21949 \let\Righttorque\textlcurvearrowdown
21950 \let\LeftTorque\textrcurvearrowdown
21951 \let\Lefttorque\textrcurvearrowdown
21952 \let\textvarobar\textobar
21953 \let\circledbslash\textobslash
21954 \let\obackslash\textobslash
21955 \let\varobslash\textobslash
21956 \let\odplus\textobot
21957 \let\varolessthan\textolessthan
21958 \let\varogreaterthan\textogreaterthan
21959 \let\divdot\textminusdot
21960 \let\doublesqcap\textsquaddoublecap
21961 \let\doublesqcup\textsquaddoublecup
21962 \let\merge\textdoublevee
21963 \let\leftVdash\textdashV
21964 \let\nleftVdash\textndashV
21965 \let\leftmodels\textDashv
21966 \let\nleftmodels\textnDashv
21967 \let\leftModels\textDashV
21968 \let\nleftModels\textnDashV
21969 \let\varparallel\textsslash
21970 \let\textheng\textPUheng
21971 \let\textlhookfour\textPUlhookfour
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