

Hypertext marks in L^AT_EX

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<https://github.com/latex3/hyperref/issues>
2021-02-10 v7.00j

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.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hycheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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



```

37 \space\space Loaded: `\'HyC@package' %
38 \csname ver@\'HyC@package.sty\endcsname
39 }%
40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

82 \let\HyC@org@robustoptcmd\HyC@noValue
83 \HyC@next
84 }

```

\HyC@noValue

```

85 \def\HyC@noValue{NoValue}

```

\HyC@newcommand The code for \newcommand.

```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

114 \def\HyC@DeclareRobustCommand{%
115 \edef\HyC@robustcmd{%

```

```

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

\HyC@def The parameter text of \def or \edef is stored in the token register \HyC@Toks.
\HyC@edef 125 \def\HyC@def#1#{%
126 \HyC@Toks={#1}%
127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

\HyC@doCheck This command performs the checks and prints the result.
130 \def\HyC@doCheck{%
131 \typeout{* Checking ` \HyC@string\HyC@cmd':}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

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

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

\HyC@checkOk The result, if the check succeeds.
154 \def\HyC@checkOk#1{%
155 \typeout{\space\space` \HyC@string#1' ok.}%
156 }

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

```

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

`\Hy@SetCatcodes`

```

181 \def\Hy@SetCatcodes{%
182   \@makeother`\%
183   \@makeother\=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \@makeother\| %
189   \@makeother\:%
190   \@makeother\(%
191   \@makeother\)%
192   \@makeother\[ %
193   \@makeother\] %
194   \@makeother\/ %
195   \@makeother\! %
196   \@makeother\<%

```

```

197 \@makeother\>%
198 \@makeother\.%
199 \@makeother\;%
200 \@makeother\+%
201 \@makeother\-%
202 \@makeother\"%
203 \@makeother\'%
204 }

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\${%
210   \x\&%
211   \x\~%
212   \x\_%
213   \x\|%
214   \x\:%
215   \x\(%
216   \x\) %
217   \x\[ %
218   \x\] %
219   \x\/%
220   \x\!%
221   \x\<%
222   \x\>%
223   \x\.%
224   \x\;%
225   \x\+%
226   \x\-%
227   \x\"%
228   \x\'%
229 }%
230 \endgroup

```

231 \Hy@SetCatcodes

change 2020-07-24: require newer pdftexcmds and remove fallback code for version older than 2010.

```

232 \RequirePackage{ltxcmds}[2010/11/12]
233 \RequirePackage{iftex}[2019/10/24]
234 \RequirePackage{pdftexcmds}[2018/09/10]
235 \RequirePackage{infwarerr}[2010/04/08]
236 \RequirePackage{keyval}[1997/11/10]
237 \RequirePackage{kvsetkeys}[2007/09/29]
238 \RequirePackage{kvdefinekeys}[2011/04/07]
239 \RequirePackage{pdfescape}[2007/11/11]
240 \RequirePackage{hycolor}
241 \RequirePackage{letltxmacro}[2008/06/13]
242 \RequirePackage{auxhook}[2009/12/14]
243 \def\Hy@Error{\@PackageError{hyperref}}
244 \def\Hy@Warning{\@PackageWarning{hyperref}}

```

```

245 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
246 \def\Hy@Info{\@PackageInfo{hyperref}}
247 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
248 \def\Hy@Message#1{%
249   \GenericWarning{%
250     (hyperref)\@spaces\@spaces\@spaces\@spaces
251   }{%
252     Package hyperref Message: #1\ltx@gobble
253   }%
254 }

```

4.2 Version check

\Hy@VersionChecked

```

255 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

256 \def\Hy@VersionCheck#1{%
257   \begingroup
258   \ltx@ifundefined{ver@hyperref.sty}{%
259     \Hy@Error{%
260       This should not happen!\MessageBreak
261       Missing hyperref version%
262     }\@ehd
263   }{%
264     \ltx@ifundefined{ver@#1}{%
265       \Hy@Error{%
266         This should not happen!\MessageBreak
267         Missing version of `#1'%
268       }\@ehd
269     }{%
270       \def\x##1##2##3{%
271         \expandafter\expandafter\expandafter\Hy@@VersionCheck
272         \expandafter\expandafter\expandafter##2%
273         \csname ver@##3\endcsname##1##1\@nil
274       }%
275       \x{ }\y{hyperref.sty}%
276       \x{ }\z{#1}%
277       \ifx\y\z
278         \else
279         \edef\a{#1}%
280         \edef\b{\HyOpt@CustomDriver.def}%
281         \ifx\a\b
282           \Hy@WarningNoLine{%
283             Version mismatch (custom driver)!\MessageBreak
284             * \y: hyperref.sty\MessageBreak
285             * \z: \a
286           }%
287         \else
288         \Hy@Error{%
289           Version mismatch!\MessageBreak
290           * \y: hyperref.sty\MessageBreak
291           * \z: \a
292         }\@ehd

```

```

293     \fi
294     \fi
295   }%
296 }%
297 \endgroup
298 \chardef\Hy@@VersionChecked=1 %
299 }

```

\Hy@@VersionCheck

```

300 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
301   \def#1{#2 #3}%
302 }

```

4.3 Checks with regular expressions

```

303 \ltx@ifundefined{pdfmatch}{%
304   \def\Hy@Match#1#2#3#4#5{%
305   }{%
306     \def\Hy@Match#1#2#3{%
307       \begingroup
308       \edef\~{\ltx@backslashchar\string~}%
309       \edef\.\{\ltx@backslashchar.}%
310       \edef\[\{\ltx@backslashchar[]}%
311       \edef\${\ltx@backslashchar$}%
312       \edef\({\ltx@backslashchar(%
313       \edef\){\ltx@backslashchar)%
314       \edef\|{\ltx@backslashchar|}%
315       \edef\*{\ltx@backslashchar*}%
316       \edef\+{\ltx@backslashchar+}%
317       \edef\?{\ltx@backslashchar?}%
318       \edef\{{\ltx@backslashchar\ltx@leftbracechar}%
319       \edef\}{\ltx@rightbracechar}%
320       \edef\\{\ltx@backslashchar\ltx@backslashchar}%
321       \let\ \ltx@space
322       \ifcase\pdfmatch#2{#3}{#1} %
323         \endgroup
324         \expandafter\ltx@secondoftwo
325       \or
326         \endgroup
327         \expandafter\ltx@firstoftwo
328       \else
329         \Hy@Warning{%
330           Internal error: Wrong pattern!\MessageBreak
331           --> #3 <--\MessageBreak
332           Pattern check ignored%
333         }%
334         \endgroup
335         \expandafter\ltx@firstoftwo
336       \fi
337     }%
338 }

```

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`.

```
339 \@ifundefined{AfterBeginDocument}{%
340   \def\AfterBeginDocument{\AtBeginDocument}%
341 }{}%
```

`\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.

```
342 \def\Hy@AtBeginDocument{%
343   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
344 }
```

`\Hy@AtEndOfPackage`

```
345 \def\Hy@AtEndOfPackage{%
346   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
347 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

```
350 \AtEndOfPackage{%
351   \Hy@AtEndOfPackageHook
352   \let\Hy@AtEndOfPackageHook\@undefined
353   \AfterBeginDocument{%
354     \Hy@AtBeginDocumentHook}%
355   \let\Hy@AtBeginDocumentHook\@undefined
356   }%
357 }
```

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

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

4.5 Switches

```
359 \newif\ifHy@stoppedearly
360 \newif\ifHy@typexml
361 \newif\ifHy@activeanchor
362 \newif\ifHy@backref
363 \newif\ifHy@bookmarks
```



```

364 \newif\ifHy@bookmarksnumbered
365 \newif\ifHy@bookmarksopen
366 \newif\ifHy@breaklinks
367 \newif\ifHy@pdfcenterwindow
368 \newif\ifHy@CJKbookmarks
369 \newif\ifHy@colorlinks
370 \newif\ifHy@destlabel
371 \newif\ifHy@draft
372 \let\Hy@finaltrue\Hy@draftfalse
373 \let\Hy@finalfalse\Hy@drafttrue
374 \newif\ifHy@pdfescapeform
375 \newif\ifHy@hyperfigures
376 \newif\ifHy@pdfitwindow
377 \newif\ifHy@frenchlinks
378 \newif\ifHy@hyperfootnotes
379 \newif\ifHy@hyperindex
380 \newif\ifHy@hypertextnames
381 \newif\ifHy@implicit
382 \newif\ifHy@linktopage
383 \newif\ifHy@localanchorname
384 \newif\ifHy@pdfmenubar
385 \newif\ifHy@naturalnames
386 \newif\ifHy@nesting
387 \newif\ifHy@pdfnewwindowset
388 \newif\ifHy@pdfnewwindow
389 \newif\ifHy@ocgcolorlinks
390 \newif\ifHy@pageanchor
391 \newif\ifHy@pdfpagelabels
392 \newif\ifHy@pdfstring
393 \newif\ifHy@plainpages
394 \newif\ifHy@psize
395 \newif\ifHy@raiselinks
396 \newif\ifHy@seminarslides
397 \newif\ifHy@setpagesize
398 \newif\ifHy@texht
399 \newif\ifHy@psdextra
400 \newif\ifHy@pdftoolbar
401 \newif\ifHy@unicode
402 \newif\ifHy@pdfusetitle
403 \newif\ifHy@verbose
404 \let\Hy@debugtrue\Hy@verbosetrue
405 \let\Hy@debugfalse\Hy@verbosefalse
406 \newif\ifHy@pdfwindowui
407 \newif\ifHy@pdfdisplaydoctitle
408 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

409 \Hy@backreffalse
410 \Hy@bookmarksnumberedfalse
411 \Hy@bookmarksopenfalse
412 \Hy@bookmarkstrue
413 \Hy@breaklinksfalse
414 \Hy@pdfcenterwindowfalse
415 \Hy@CJKbookmarksfalse
416 \Hy@destlabelfalse

```

```

417 \Hy@pdfescapeformfalse
418 \Hy@hyperfiguresfalse
419 \Hy@pdffitwindowfalse
420 \Hy@hyperfootnotetrue
421 \Hy@hyperindextrue
422 \Hy@hypertextnamestrue
423 \Hy@implicitttrue
424 \Hy@linktocpagefalse
425 \Hy@localanchornamefalse
426 \Hy@pdfmenubartrue
427 \Hy@naturalnamesfalse
428 \Hy@nestingfalse
429 \Hy@pdfnewwindowsetfalse
430 \Hy@pdfnewwindowfalse
431 \Hy@pageanchortrue
432 \Hy@pdfpagelabelstrue
433 \Hy@pdfstringfalse
434 \Hy@plainpagesfalse
435 \Hy@raiselinksfalse
436 \Hy@setpagesizetrue
437 \Hy@texhtfalse
438 \Hy@psdextrafalse
439 \Hy@pdftoolbartrue
440 \Hy@typexmlfalse
441 \Hy@unicodetrue
442 \ifx\kanjiskip\@undefined
443 \else
444 \ifx\forcecjktoken\@undefined
445 \Hy@unicodetrue
446 \fi
447 \fi
448 \Hy@pdfusetitlefalse
449 \Hy@verbosefalse
450 \Hy@pdfwindowuitrue
451 \Hy@pdfdisplaydoctitlefalse
452 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

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

\Hy@GlobalStepCount

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

```

455 \newdimen\@linkdim
456 \let\Hy@driver\ltx@empty
457 \let\MaybeStopEarly\relax
458 \newcount\Hy@linkcounter
459 \newcount\Hy@pagecounter
460 \Hy@linkcounter0
461 \Hy@pagecounter0

```

5.1 Macros for recursions

```

462 \let\Hy@ReturnEnd\@empty
463 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
464 \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.

```

465 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
466 \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`

```

467 \begingroup\expandafter\expandafter\expandafter\endgroup
468 \expandafter\ifx\csname dimexpr\endcsname\relax
469 \def\hypercalcbpdef#1#2{%
470 \begingroup
471 \toks@{}%
472 \HyCal@scan#2\hypercalcbp\@nil
473 \expandafter\endgroup
474 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
475 }%
476 \def\HyCal@scan#1\hypercalcbp#2\@nil{%

```

```

477 \toks@\expandafter{\the\toks@ #1}%
478 \ifx\#2\%
479 \else
480 \ltx@ReturnAfterFi{%
481 \HyCal@do#2\@nil
482 }%
483 \fi
484 }%
485 \def\HyCal@do#1#2\@nil{%
486 \@ifpackageloaded{calc}{\%
487 \Hy@Warning{%
488 For calculations \string\hypercalcbp\space needs\MessageBreak
489 package calc or e-TeX%
490 }%
491 }%
492 \setlength{\dimen@}{#1}%
493 \setlength{\dimen@}{0.99626401\dimen@}%
494 \edef\x{%
495 \toks@{%
496 \the\toks@
497 \strip@pt\dimen@
498 }%
499 }\x
500 \HyCal@scan#2\@nil
501 }%
502 \else
503 \def\hypercalcbp#1{%
504 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
505 }%
506 \def\hypercalcbpdef{\def}%
507 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

- Strings are stored either in PDFDocEncoding, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
509 \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.

```
510 \escapechar`\%
```

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

```
511 \edef\0{\string\0}%
512 \edef\1{\string\1}%
513 \edef\2{\string\2}%
514 \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.

```
515 \ifHy@unicode
516 \edef\8{\string\8}%
517 \edef\9{\string\9}%
518 \fontencoding{PU}%
519 \HyPsd@UTFviii
520 \def\ifpdfstringunicode###1##2{##1}%
521 \else
522 \fontencoding{PD1}%
523 \def\ifpdfstringunicode###1##2{##2}%
524 \fi
525 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
526 \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).

```
527 \@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).

```
528 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
529 \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) <https://github.com/latex3/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

530 \let\{\textbraceleft
531 \let\}\textbraceright
532 \let\\\textbackslash
533 \let\#\textnumbersign
534 \let\$\textdollar
535 \let\%\textpercent
536 \let\&\textampersand
537 % \let~\textasciitilde
538 \let\_ \textunderscore
539 \let\P\textparagraph
540 \let\ldots\textellipsis
541 \let\dots\textellipsis
542 \ltx@ifundefined{textEncodingNoboundary}%
543 {}{\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.

```

544 \def\{\pdfstringdefWarn\}%
545 \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. We use the direct PU code to avoid problems if `\textepsilon` is not defined.

```

546 \def\TeX{\TeX}%
547 \def\LaTeX{La\TeX}%
548 \def\LaTeXe{%
549   \LaTeX2%
550   \ifHy@unicode\83\265\else e\fi
551 }%
552 \def\eTeX{%
553   \ifHy@unicode\83\265\else e\fi
554   -\TeX%
555 }%
556 \def\SliTeX{Sli\TeX}%
557 \def\MF{Metafont}%
558 \def\MP{Metapost}%

```

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

```

559 \let\fontencoding\@gobble
560 \let\fontfamily\@gobble
561 \let\fontseries\@gobble
562 \let\fontshape\@gobble
563 \let\fontsize\@gobbletwo
564 \let\selectfont\@empty
565 \let\usefont\@gobblefour
566 \let\emph\@firstofone
567 \let\textnormal\@firstofone
568 \let\textrm\@firstofone
569 \let\textsf\@firstofone
570 \let\texttt\@firstofone
571 \let\textbf\@firstofone
572 \let\textmd\@firstofone
573 \let\textit\@firstofone
574 \let\textsc\@firstofone
575 \let\textsl\@firstofone
576 \let\textup\@firstofone
577 \let\normalfont\@empty
578 \let\rmfamily\@empty
579 \let\sffamily\@empty
580 \let\ttfamily\@empty
581 \let\bfseries\@empty
582 \let\mdseries\@empty
583 \let\itshape\@empty
584 \let\scshape\@empty
585 \let\slshape\@empty
586 \let\upshape\@empty
587 \let\em\@empty
588 \let\rm\@empty
589 \let\Huge\@empty
590 \let\LARGE\@empty
591 \let\Large\@empty
592 \let\footnotesize\@empty
593 \let\huge\@empty
594 \let\large\@empty
595 \let\normalsize\@empty
596 \let\scriptsize\@empty
597 \let\small\@empty
598 \let\tiny\@empty
599 \let\mathversion\@gobble
600 \let\phantom\@gobble
601 \let\vphantom\@gobble
602 \let\hphantom\@gobble

```

Package pifont.

```

603 \let\ding\HyPsd@ding
604 \let\Cube\HyPsd@DieFace
605 %* \HyPsd@DieFace -> \epsdice (epsdice)
606 %* \HyPsd@DieFace -> \fcdice (hhcount)

```


Environments.

```
607 \def\begin##1{\csname##1\endcsname}%
608 \def\end##1{\csname end##1\endcsname}%
```

Package color.

```
609 \def\textcolor##1##{\@secondoftwo}%
```

Upper- and lowercase.

```
610 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
611 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%
```

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

```
612 \ifHy@psdextra
613 \ifHy@unicode
614 \csname psdmapshortnames\endcsname
615 \csname psdaliasnames\endcsname
616 \fi
617 \fi
```

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

```
618 \let\foreignlanguage\@secondoftwo
619 \let\textlatin\@firstofone
620 \ltx@ifundefined{language@group}{-}{%
621 \let\bbl@info\@gobble
622 \csname HyPsd@babel@\language@group\endcsname
623 }%
624 \HyPsd@SpanishPatch
625 \let\@safe@activetrue\relax
626 \let\@safe@activesfalse\relax
```

Disable \cyr, used in russianb.ldf.

```
627 \let\cyr\relax
```

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

```
628 \let\es@roman\@Roman
```

Package german.

```
629 \let\glqq\textglqq
630 \let\grqq\textgrqq
631 \let\glq\textglq
632 \let\grq\textgrq
633 \let\flqq\textflqq
634 \let\frqq\textfrqq
635 \let\flq\textflq
636 \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}
```

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

AMS classes.

```
638 \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.

```
639 \let\hspace\HyPsd@hspace
```

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

```
640 \let\label\@gobble
641 \let\index\@gobble
642 \let\glossary\@gobble
643 \let\href\HyPsd@href
644 \let\@mkboth\@gobbletwo
```

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

```
645 \let\ref\HyPsd@ref
646 \let\pageref\HyPsd@pageref
647 \let\nameref\HyPsd@nameref
648 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
649 \let\leavevmode\@empty
650 \let\mbox\@empty
```

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

```
651 \def\halign{\pdfstringdefWarn\halign\@gobble}%
652 \let\ignorespaces\HyPsd@ignorespaces
653 \let\Hy@SectionAnchorHref\@gobble
654 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
655 \HyPsd@CJKhook
```

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

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

```
656 \Hy@pdfstringtrue
657 \pdfstringdefPreHook
```

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

```
658 \HyPsd@LetUnexpandableSpace\space
659 \HyPsd@LetUnexpandableSpace\ %
660 \HyPsd@LetUnexpandableSpace~%
661 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
662 \ltx@ifundefined{@xspace}{%
663 \let\xspace\HyPsd@ITALCORR
664 }{%
665 \let\xspace\HyPsd@XSPACE
666 }%
667 \let\/\HyPsd@ITALCORR
668 \let\bgroup\/%
669 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
670 \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:

```
671 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
672 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
673 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
674 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'args':

```
675 \let\@protected@testopt@args\HyPsd@protected@testopt
```

6.2.2 Expansion

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

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

\csname: First the string is expanded within a `\csname` and `\endcsname`. Then the command name is converted to characters with catcode 12 by `\string` and the first escape character removed by `\@gobble`. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot be processed

without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

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

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

```
676 \begingroup
677 \let\GenericError\@gobblefour
678 \let\GenericWarning\@gobbletwo
679 \let\GenericInfo\@gobbletwo
```

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

```
680 \ifx\nofrenchguillemets\undefined
681 \else
682 \nofrenchguillemets
683 \fi
```

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

```
684 \let\Hy@temp\xdef
685 \let\def\HyPsd@DefCommand
686 \let\gdef\HyPsd@DefCommand
687 \let\edef\HyPsd@DefCommand
688 \let\xdef\HyPsd@DefCommand
689 \let\futurelet\HyPsd@LetCommand
690 \let\let\HyPsd@LetCommand
691 \Hy@temp#1{#2}%
692 \endgroup
```

6.2.3 Postprocessing

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

```
693 \ifx#1\@empty
694 \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 a marker for the xspace support.
- \TeX silently removes the outermost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```
695 \HyPsd@ProtectSpaces#1%
696 \let\HyPsd@String\@empty
697 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
698 \global\let#1\HyPsd@String
```

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

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

After $\text{\HyPsd@CheckCatcodes}$ 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 $\text{\HyPsd@CheckCatcodes}$ is called.

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

```
699 \let\HyPsd@SPACEOPTI\relax
700 {%
```

```

701 \let\HyPsd@String\@empty
702 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
703 \global\let#1\HyPsd@String
704 }%
705 \expandafter\HyPsd@RemoveMask\expandafter
706 |\expandafter\@empty#1\HyPsd@End#1%

```

\HyPsd@CheckCatcodes should not have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause too 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.

```

707 \expandafter
708 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
709 \let\HyPsd@String\@empty
710 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
711 \global\let#1\HyPsd@String

```

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

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

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

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

```

713 \ifHy@unicode
714 \expandafter\HyPsd@StringSubst\cename 80\040\endcename
715 \HyPsd@SPACEOPTI#1%
716 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
717 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
718 {\HyPsd@SPACEOPTI\80\273}#1%
719 \else
720 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
721 \expandafter\HyPsd@Subst\expandafter{%
722 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
723 \string\273}{\HyPsd@SPACEOPTI\273}#1%
724 \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.

```

725 \ifHy@unicode
726 \HyPsd@StringSubst{\)}{\80\051}#1%
727 \HyPsd@Subst){\80\051}#1%
728 \let\HyPsd@empty\relax
729 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
730 {\HyPsd@empty\80\051}#1%
731 \else
732 \HyPsd@StringSubst{\)}{\051}#1%
733 \HyPsd@Subst){\051}#1%
734 \let\HyPsd@empty\relax
735 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
736 \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`.

```

737 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
738 \ltx@ifundefined{@xspace}{%
739 }{%
740 \let\HyPsd@xspace\relax
741 \expandafter\HyPsd@Subst\expandafter
742 {\HyPsd@XSPACE}\HyPsd@xspace#1%
743 \let\HyPsd@xspace\HyPsd@doxspace
744 }%
745 \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.

```

746 \HyPsd@Subst{---}\textemdash#1%
747 \HyPsd@Subst{--}\textendash#1%
748 % \HyPsd@Subst{fi}\textfi#1%
749 % \HyPsd@Subst{fl}\textfl#1%
750 \HyPsd@Subst{!`}\textexclamdown#1%
751 \HyPsd@Subst{?`}\textquestiondown#1%

```

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

```

752 \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.

```

753 \ifHy@unicode
754 \HyPsd@StringSubst\(\textparenleft#1%
755 \HyPsd@Subst(\textparenleft#1%
756 \else
757 \HyPsd@StringSubst\({\050}#1%
758 \HyPsd@Subst({\050}#1%
759 \HyPsd@StringSubst{\050}{\string\{ }#1%
760 \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.

```

761 \ifHy@unicode
762 \edef\HyPsd@SPACEOPTI{\80\040}%
763 \else
764 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
765 \fi
766 \xdef#1{#1\@empty}%
767 \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.

```

768 \endgroup
769 \begingroup
770 \ifHy@unicode
771 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

772 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
773 \ltx@ifundefined{StringEncodingConvertTest}{%
774 }{%
775 \EdefUnescapeString\HyPsd@temp#1%
776 \iftutex

```



```

777     \let\HyPsd@UnescapedString\HyPsd@temp
778     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
779         {utf16be}{ascii-print}{}%
780     \EdefEscapeString\HyPsd@temp\HyPsd@temp
781     \global\let#1\HyPsd@temp
782     \HyPsd@EscapeTeX#1%
783     \Hy@unicodedefalse
784 }{%
785     \HyPsd@EscapeTeX#1%
786 }%
787 \else
788     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
789         {utf16be}{pdfdoc}{}%
790     \EdefEscapeString\HyPsd@temp\HyPsd@temp
791     \global\let#1\HyPsd@temp
792     \HyPsd@EscapeTeX#1%
793     \Hy@unicodedefalse
794 }{}%
795 \fi
796 }%
797 \fi
798 \fi

```

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

```

799     \pdfstringdefPostHook#1%
800 \endgroup
801 }

```

`\Hy@pdfstringdef`

```

802 \def\Hy@pdfstringdef#1#2{%
803     \pdfstringdef\Hy@gtemp{#2}%
804     \let#1\Hy@gtemp
805 }

```

6.3 Encodings

6.3.1 XeTeX

change 2020-05-13: the special code for XeTeX big chars has been removed as no longer needed.

6.3.2 Workaround for package linguex

```

806 \@ifpackageloaded{linguex}{%
807     \let\HyLinguex@OrgB\b
808     \let\HyLinguex@OrgC\c
809     \let\HyLinguex@OrgD\d
810     \def\HyLinguex@Restore{%
811         \let\b\HyLinguex@OrgB
812         \let\c\HyLinguex@OrgC
813         \let\d\HyLinguex@OrgD
814     }%

```

```

815 \Hy@AtEndOfPackage{%
816   \pdfstringdefDisableCommands{%
817     \ltx@ifundefined{oldb}{\let\b\oldb}%
818     \ltx@ifundefined{oldc}{\let\c\oldc}%
819     \ltx@ifundefined{oldd}{\let\d\oldd}%
820   }%
821 }%
822 }{%
823 \let\HyLinguex@Restore\relax
824 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

825 \def\Hy@SaveCatcodeSettings#1{%
826   \expandafter\edef\csname Hy@cat@#1\endcsname{%
827     \endlinechar=\the\endlinechar\relax
828     \catcode32 \the\catcode32\relax % (space)
829     \catcode34 \the\catcode34\relax % "
830     \catcode35 \the\catcode35\relax % #
831     \catcode37 \the\catcode37\relax % (percent)
832     \catcode40 \the\catcode40\relax % (
833     \catcode41 \the\catcode41\relax % )
834     \catcode42 \the\catcode42\relax % *
835     \catcode46 \the\catcode46\relax % .
836     \catcode58 \the\catcode58\relax % :
837     \catcode60 \the\catcode60\relax % <
838     \catcode61 \the\catcode61\relax % =
839     \catcode62 \the\catcode62\relax % >
840     \catcode64 \the\catcode64\relax % @
841     \catcode91 \the\catcode91\relax % [
842     \catcode92 \the\catcode92\relax % (backslash)
843     \catcode93 \the\catcode93\relax % ]
844     \catcode123 \the\catcode123\relax % {
845     \catcode124 \the\catcode124\relax % |
846     \catcode125 \the\catcode125\relax % }
847   }%
848   \endlinechar=-1 %
849   \catcode32 10 % (space)
850   \catcode34 12 % "
851   \catcode35 6 % #
852   \catcode37 14 % (percent)
853   \catcode40 12 % (
854   \catcode41 12 % )
855   \catcode42 12 % *
856   \catcode46 12 % .
857   \catcode58 12 % :
858   \catcode60 12 % <
859   \catcode61 12 % =
860   \catcode62 12 % >
861   \catcode91 12 % [
862   \catcode92 0 % (backslash)
863   \catcode93 12 % ]
864   \catcode123 1 % {
865   \catcode124 12 % |

```

```

866 \catcode125 2 % }
867 \makeatletter
868 }

```

`\Hy@RestoreCatcodeSettings`

```

869 \def\Hy@RestoreCatcodeSettings#1{%
870 \csname Hy@cat@#1\endcsname
871 \expandafter\let\csname Hy@cat@#1\endcsname\relax
872 }

```

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.

```

873 \@ifundefined{T@PD1}{%
874 \Hy@SaveCatcodeSettings{pd1}%
875 \input{pd1enc.def}%
876 \Hy@RestoreCatcodeSettings{pd1}%
877 \HyLinguex@Restore
878 }{}%
879 \DeclareFontFamily{PD1}{pdf}{}
880 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
881 \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. change 2020-08-14: Starting with version v7.00f the file is always loaded and unicode is the default 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`.

```

882 \def\HyPsd@LoadUnicode{%
883 \@ifundefined{T@PU}{%
884 \Hy@SaveCatcodeSettings{pu}%
885 \input{puenc.def}%
886 \Hy@RestoreCatcodeSettings{pu}%
887 \HyLinguex@Restore
888 }{}%
889 \DeclareFontFamily{PU}{pdf}{}%
890 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
891 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
892 \HyPsd@LoadExtra
893 \let\HyPsd@LoadUnicode\relax
894 }

```

`\HyPsd@LoadExtra`

```

895 \def\HyPsd@LoadExtra{%
896   \ifHy@psdextra
897     \ltx@iffileloaded{puenc.def}{-%
898       \ltx@iffileloaded{puenc-greek.def}{}{-%
899         \Hy@SaveCatcodeSettings{pu}%
900         \input{puenc-greek.def}%
901         \Hy@RestoreCatcodeSettings{pu}}}%
902     \Hy@SaveCatcodeSettings{psdextra}%
903     \input{psdextra.def}%
904     \Hy@RestoreCatcodeSettings{psdextra}%
905     \let\HyPsd@LoadExtra\relax
906   }{}%
907 \fi
908 }
```

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 T_EX's stomach, the second contains the replacement for PDF strings.

```

909 \def\texorpdfstring{%
910   \ifHy@pdfstring
911     \expandafter\@secondoftwo
912   \else
913     \expandafter\@firstoftwo
914   \fi
915 }
```

6.4.2 Hooks for `\pdfstringdef`

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

```

916 \@ifundefined{pdfstringdefPreHook}{%
917   \let\pdfstringdefPreHook\@empty
918 }{}
919 \@ifundefined{pdfstringdefPostHook}{%
920   \let\pdfstringdefPostHook\@gobble
921 }{}

```

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

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

```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
}
```

```

\def\url{\pdfstringdefWarn\url}%
\let\textcolor\@gobble
}%

```

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

```

922 \def\pdfstringdefDisableCommands{%
923   \begingroup
924     \makeatletter
925     \HyPsd@DisableCommands
926 }

```

`\HyPsd@DisableCommands`

```

927 \long\def\HyPsd@DisableCommands#1{%
928   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
929   \endgroup
930 }

```

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

```

931 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
932 \AtBeginDocument{%
933   \@ifundefined{pdfstringdefDisableCommands}{%
934     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
935   }{}%
936 }

```

`\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`.

```

937 \def\pdfstringdefWarn#1{%
938   \expandafter\noexpand\csname<>-string#1\endcsname
939 }

```

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.

```

940 \begingroup
941   \catcode0=12 %

```

```

942 \def\x{\endgroup
943 \def\HyPsd@ignorespaces{%
944 \romannumeral\expandafter`\expandafter^^@%
945 \romannumeral^^@%
946 }%
947 }%
948 \x

```

6.5.2 Babel languages

change 2020-10-10: moved language patches to its own file as a first step toward removing them completely.

```

949 \newif\ifHy@next
950 \input{hyperref-langpatches.def}
951 \</package>
952 \<*lang>

```

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

As consequence the shorthands were shown in the bookmarks, and required a hyperref patch. In version 3.48 babel removed this unneeded code and so the patch could be removed.

Nothing to do for english. change 2020/07/16: removed patch for french. No longer needed. change 2020/07/21: removed patches for german, ngerman. Will be done by the language package. <https://github.com/jspitz/babel-german/issues/4> change 2020/10/10: removed patches for danish, dutch, finnish, portugues, swedish, usorbian, slovene see <https://github.com/latex3/babel/issues/84> change 2020/10/10: removed patch for macedonian, ukrainian; maintainers notified. change 2020/10/11: removed patch for russian, has been merged into babel-russian see <https://github.com/kia999/babel-russian/pull/3> change 2021/02/04: removed patches for greek numerals, code is now in babel-greek. spanish: Nested quoting environments are not supported (<<, >>).

```

953 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
954 \def\HyPsd@babel@spanish{%
955 \declare@shorthand{spanish}{<<}{\guillemotleft}%
956 \declare@shorthand{spanish}{>>}{\guillemotright}%
957 \declare@shorthand{spanish}{=}{{-}}%
958 \declare@shorthand{spanish}{~}{-}%
959 \declare@shorthand{spanish}{!}{\textexclamdown}%
960 \declare@shorthand{spanish}{?}{\textquestiondown}%
961 }%
962 }
963 \def\HyPsd@SpanishPatch{%
964 \ltx@ifundefined{es@save@dot}{-}{%
965 }{%
966 \let\.\es@save@dot
967 }%
968 }
969 \</lang>
970 \<*package>

```

6.5.3 CJK patch

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

\HyPsd@CJKhook

972 \def\HyPsd@CJKhook{%
973   \ltx@ifpackageloaded{CJK}{%
974     \let\CJK@kern\relax
975     \let\CJKkern\relax
976     \let\CJK@CJK\relax
977     \ifHy@CJKbookmarks
978       \HyPsd@CJKhook@bookmarks
979     \fi
980     \HyPsd@CJKhook@unicode
981   }{%
982 }
```

6.5.4 CJK bookmarks

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

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

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

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

```
983 \begingroup
984   \catcode"7F=\active
985   \toks@{%
986     \let\CJK@ignorespaces\empty
987     \def\CJK@char#1{\@gobbletwo}%
988     \let\CJK@charx\@gobblefour
989     \let\CJK@punctchar\@gobblefour
990     \def\CJK@punctcharx#1{\@gobblefour}%
991     \catcode"7F=\active
992     \def^^7f#1^^7f#2^^7f{%
993       \string #1\HyPsd@DecimalToOctal{#2}%
994     }%
995     % ... ?
996     \ifHy@unicode
997       \def\Hy@cjkpu{\80}%
998     \else
999       \let\Hy@cjkpu\@empty
1000   \fi
1001   \HyPsd@CJKActiveChars
1002 }%
1003 \count@=127 %
1004 \@whilenum\count@<255 \do{%
1005   \advance\count@ by 1 %
1006   \lccode`\~=\count@
1007   \lowercase{%
1008     \toks@\expandafter{\the\toks@ ~}%

```

```

1009 }%
1010 }%
1011 \toks@\expandafter{\the\toks@ !}%
1012 \xdef\HyPsd@CJKhook@bookmarks{%
1013   \the\toks@
1014 }%
1015 \endgroup

```

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

```

1016 \def\HyPsd@CJKActiveChars#1{%
1017   \ifx#1!%
1018     \let\HyPsd@CJKActiveChars\relax
1019   \else
1020     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1021   \fi
1022   \HyPsd@CJKActiveChars
1023 }

```

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

```

1024 \def\HyPsd@DecimalToOctal#1{%
1025   \ifcase #1 %
1026     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1027     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1028     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1029     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1030     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1031     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1032     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1033     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1034     \or @\or A\or B\or C\or D\or E\or F\or G%
1035     \or H\or I\or J\or K\or L\or M\or N\or O%
1036     \or P\or Q\or R\or S\or T\or U\or V\or W%
1037     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1038     \or \140\or a\or b\or c\or d\or e\or f\or g%
1039     \or h\or i\or j\or k\or l\or m\or n\or o%
1040     \or p\or q\or r\or s\or t\or u\or v\or w%
1041     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1042     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1043     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1044     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1045     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1046     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1047     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1048     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1049     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1050     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1051     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1052     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1053     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1054     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1055     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1056     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1057     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%

```



```

1058 \fi
1059 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1060 \def\HyPsd@CJKhook@unicode{%
1061 \let\Unicode\HyPsd@CJK@Unicode
1062 \let\CJKnumber\HyPsd@CJKnumber
1063 \let\CJKdigits\HyPsd@CJKdigits
1064 }

```

\HyPsd@CJK@Unicode

```

1065 \def\HyPsd@CJK@Unicode#1#2{%
1066 \ifnum#1<256 %
1067 \HyPsd@DecimalToOctalFirst{#1}%
1068 \HyPsd@DecimalToOctalSecond{#2}%
1069 \else
1070 \933%
1071 \expandafter\expandafter\expandafter\HyPsd@HighA
1072 \intcalcDiv{#1}{4}!%
1073 \933%
1074 \ifcase\intcalcMod{#1}{4} %
1075 4\or 5\or 6\or 7%
1076 \fi
1077 \HyPsd@DecimalToOctalSecond{#2}%
1078 \fi
1079 }

1080 \def\HyPsd@HighA#1!{%
1081 \expandafter\expandafter\expandafter\HyPsd@HighB
1082 \IntCalcDiv#1!64!!%
1083 \expandafter\expandafter\expandafter\HyPsd@HighD
1084 \IntCalcMod#1!64!!%
1085 }
1086 \def\HyPsd@HighB#1!{%
1087 \expandafter\expandafter\expandafter\HyPsd@HighC
1088 \IntCalcDec#1!!%
1089 }
1090 \def\HyPsd@HighC#1!{%
1091 \IntCalcDiv#1!4!%
1092 \@backslashchar
1093 \IntCalcMod#1!4!%
1094 }
1095 \def\HyPsd@HighD#1!{%
1096 \ifcase\IntCalcDiv#1!8! %
1097 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1098 \fi
1099 \ifcase\IntCalcMod#1!8! %
1100 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1101 \fi
1102 }
1103 \def\HyPsd@DecimalToOctalFirst#1{%
1104 \9%

```

```

1105 \ifcase#1 %
1106     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1107     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1108     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1109     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1110     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1111     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1112     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1113     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1114     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1115     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1116     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1117     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1118     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1119     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1120     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1121     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1122     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1123     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1124     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1125     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1126     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1127     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1128     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1129     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1130     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1131     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1132     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1133     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1134     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1135     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1136     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1137     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1138 \fi
1139 }
1140 \def\HyPsd@DecimalToOctalSecond#1{%
1141     \ifcase #1 %
1142         \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1143         \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1144         \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1145         \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1146         \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1147         \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1148         \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1149         \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1150         \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1151         \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1152         \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1153         \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1154         \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1155         \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1156         \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1157         \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1158         \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%

```

```

1159 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1160 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1161 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1162 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1163 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1164 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1165 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1166 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1167 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1168 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1169 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1170 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1171 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1172 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1173 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1174 \fi
1175 }

1176 \def\HyPsd@CJKnumber#1{%
1177 \ifnum#1<\z@
1178 \CJK@minus
1179 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1180 \else
1181 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1182 \fi
1183 }

1184 \def\HyPsd@@CJKnumber#1{%
1185 \ifcase#1 %
1186 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1187 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1188 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1189 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1190 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1191 \CJK@ten\CJK@nine
1192 \else
1193 \ifnum#1<10000 %
1194 \HyPsd@CJKnumberFour#1!\@empty{20}%
1195 \@empty
1196 \else
1197 \ifnum#1<100000000 %
1198 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1199 \IntCalcDiv#1!10000!%
1200 !{}{20}%
1201 \CJK@tenthousand
1202 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1203 \IntCalcMod#1!10000!%
1204 !\CJK@zero{10}%
1205 \@empty
1206 \else
1207 \expandafter\HyPsd@CJKnumberLarge
1208 \number\IntCalcDiv#1!100000000!\expandafter!%
1209 \number\IntCalcMod#1!100000000!!%
1210 \fi
1211 \fi
1212 \fi

```

```

1213 }
1214 \def\HyPsd@CJKnumberLarge#1!#2!{%
1215 \HyPsd@CJKnumberFour#1!{#{20}%
1216 \CJK@hundredmillion
1217 \ifnum#2=\z@
1218 \else
1219 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1220 \IntCalcDiv#2!10000!%
1221 !\CJK@zero{10}%
1222 \CJK@tenthousand
1223 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1224 \IntCalcMod#2!10000!%
1225 !\CJK@zero{10}%
1226 \@empty
1227 \fi
1228 }
1229 \def\HyPsd@CJKnumberFour#1!#2#3{%
1230 \ifnum#1=\z@
1231 \expandafter\@gobble
1232 \else
1233 \ifnum#1<1000 %
1234 #2%
1235 \HyPsd@CJKnumberThree#1!{#{3}%
1236 \else
1237 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1238 \CJK@thousand
1239 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1240 \IntCalcMod#1!1000!%
1241 !\CJK@zero{10}%
1242 \fi
1243 \fi
1244 }
1245 \def\HyPsd@CJKnumberThree#1!#2#3{%
1246 \ifnum#1=\z@
1247 \else
1248 \ifnum#1<100 %
1249 #2%
1250 \HyPsd@CJKnumberTwo#1!{#{3}%
1251 \else
1252 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1253 \CJK@hundred
1254 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1255 \IntCalcMod#1!100!%
1256 !\CJK@zero{10}%
1257 \fi
1258 \fi
1259 }
1260 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1261 \ifnum#1=\z@
1262 \else
1263 \ifnum#1<#3 %
1264 #2%
1265 \HyPsd@@@CJKnumber{#1}%
1266 \else

```

```

1267 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1268 \CJK@ten
1269 \ifnum\IntCalcMod#1!10!=\z@
1270 \else
1271 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1272 \fi
1273 \fi
1274 \fi
1275 }

1276 \def\HyPsd@CJKdigits#1{%
1277 \ifx*#1\relax
1278 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1279 \else
1280 \HyPsd@@CJKdigits\CJK@null{#1}%
1281 \fi
1282 }

1283 \def\HyPsd@@CJKdigits#1#2{%
1284 \ifx\#2\%
1285 \else
1286 \HyPsd@@@CJKdigits#1#2\@nil
1287 \fi
1288 }%

1289 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1290 \HyPsd@CJKdigit#1{#2}%
1291 \ifx\#3\%
1292 \expandafter\@gobble
1293 \else
1294 \expandafter\@firstofone
1295 \fi
1296 {%
1297 \HyPsd@@@CJKdigits#1#3\@nil
1298 }%
1299 }

1300 \def\HyPsd@CJKdigit#1#2{%
1301 \ifcase#2 %
1302 #1\or
1303 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1304 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1305 \fi
1306 }

```

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{%
  \ifx\protect\@typeset@protect
    \inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname?\string#1\endcsname\relax
        \expandafter\def\csname?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\expandafter\endcsname
        \csname?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
      \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1307 \def\HyPsd@inmathwarn#1#2{%
1308   \ifx#2\expandafter
1309     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1310       \HyPsd@GLYPHERR
1311       \expandafter\@gobble\string#1%
1312       >%
1313       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1314     \else
1315       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1316     \fi
1317   \else
1318     \expandafter#2%
1319   \fi
1320 }
1321 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1322 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent
1323 \def\HyPsd@add@accent#1#2{%
1324   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1325   #2%
1326 }%

```

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, dimension, and skip assignments.

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

```
1327 \def\HyPsd@LetUnexpandableSpace#1{%
1328   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1329 }
```

`\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.

```
1330 \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.

```
1331 \edef\HyPsd@XSPACE{\string#\string X}
1332 \edef\HyPsd@ITALCORR{\string#\string I}
1333 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1334 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1335 \def\HyPsd@@hspace#1*#2\END{%
1336   \ifx\#2\%
1337     \HyPsd@hspacetest{#1}%
1338   \else
1339     \expandafter\HyPsd@hspacetest
1340   \fi
1341 }
```

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

```
1342 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1343 \ltx@ifundefined{tocsection}{%
1344   \let\HyPsd@AMSclassfix\relax
1345 }{%
1346   \def\HyPsd@AMSclassfix{%
```

```

1347 \let\tocpart\HyPsd@tocsection
1348 \let\tocchapter\HyPsd@tocsection
1349 \let\tocappendix\HyPsd@tocsection
1350 \let\tocsection\HyPsd@tocsection
1351 \let\tocsubsection\HyPsd@tocsection
1352 \let\tocsubsubsection\HyPsd@tocsection
1353 \let\tocparagraph\HyPsd@tocsection
1354 }%
1355 \def\HyPsd@tocsection#1#2#3{%
1356 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1357 #3%
1358 }%
1359 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1360 \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.

```

1361 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1362 \def\HyPsd@@ref#1*#2\END{%
1363 \ifx\#2\%
1364 \HyPsd@@@ref{#1}%
1365 \else
1366 \expandafter\HyPsd@@@ref
1367 \fi
1368 }%

```

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

```

1369 \def\HyPsd@@@ref#1{%
1370 \expandafter\ifx\csname r@#1\endcsname\relax
1371 ??%
1372 \else
1373 \expandafter\expandafter\expandafter
1374 \@car\csname r@#1\endcsname\@nil
1375 \fi
1376 }

```

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

```

1377 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1378 \def\HyPsd@@pageref#1*#2\END{%
1379 \ifx\#2\%
1380 \HyPsd@@@pageref{#1}%
1381 \else
1382 \expandafter\HyPsd@@@pageref
1383 \fi
1384 }

```


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

```

1385 \def\HyPsd@@@pageref#1{%
1386   \expandafter\ifx\csname r@#1\endcsname\relax
1387     ??%
1388   \else
1389     \expandafter\expandafter\expandafter\expandafter
1390     \expandafter\expandafter\expandafter\@car
1391     \expandafter\expandafter\expandafter\@gobble
1392     \csname r@#1\endcsname{}\@nil
1393   \fi
1394 }
```

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

```

1395 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```

1396 \def\HyPsd@@nameref#1*#2\END{%
1397   \ifx\#2\%
1398     \HyPsd@@@nameref{#1}%
1399   \else
1400     \expandafter\HyPsd@@@nameref
1401   \fi
1402 }
```

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

```

1403 \def\HyPsd@@@nameref#1{%
1404   \expandafter\ifx\csname r@#1\endcsname\relax
1405     ??%
1406   \else
1407     \expandafter\expandafter\expandafter\expandafter
1408     \expandafter\expandafter\expandafter\@car
1409     \expandafter\expandafter\expandafter\@gobbletwo
1410     \csname r@#1\endcsname{}\@nil
1411   \fi
1412 }
```

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

```

1413 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```

1414 \def\HyPsd@@autoref#1*#2\END{%
1415   \ifx\#2\%
1416     \HyPsd@@@autoref{#1}%
1417   \else
1418     \expandafter\HyPsd@@@autoref
1419   \fi
1420 }
```

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

```

1421 \def\HyPsd@@@autoref#1{%
1422   \expandafter\ifx\csname r@#1\endcsname\relax
```

```

1423   ??%
1424   \else
1425     \expandafter\expandafter\expandafter\HyPsd@autorefname
1426       \csname r@#1\endcsname\}\}\}\@nil
1427     \expandafter\expandafter\expandafter
1428       \@car\csname r@#1\endcsname\@nil
1429   \fi
1430 }

```

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

```

1431 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1432   \ifx\#4\%
1433   \else
1434     \HyPsd@@autorefname#4.\@nil
1435   \fi
1436 }

```

`\HyPsd@@autorefname`

```

1437 \def\HyPsd@@autorefname#1.#2\@nil{%
1438   \ltx@ifundefined{#1autorefname}{%
1439     \ltx@ifundefined{#1name}{%
1440       }{%
1441         \csname#1name\endcsname\space
1442       }%
1443     }{%
1444       \csname#1autorefname\endcsname\space
1445     }%
1446 }

```

6.5.12 Redefining the defining commands

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

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

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

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

The difference between `\HyPsd@DefCommand` and `\HyPsdLetCommand` 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 unmachted `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1447 \begingroup
1448   \def\x#1#2{%
1449     \endgroup
1450     \let#1\def
1451     \def\HyPsd@DefCommand##1##2###{%
1452       #1%
1453       \expandafter\noexpand
1454       \csname\expandafter\@gobble\string##1\@empty\endcsname
1455       \@gobble
1456     }%
1457     \let#2\let
1458     \def\HyPsd@@LetCommand##1{%
1459       \expandafter\ifx\csname##1\expandafter\endcsname
1460         \csname iftrue\endcsname
1461         \pdfstringdefWarn\let
1462         \expandafter\@gobble
1463       \else
1464         \expandafter\ifx\csname##1\expandafter\endcsname
1465           \csname iffalse\endcsname
1466           \pdfstringdefWarn\let
1467           \expandafter\expandafter\expandafter\@gobble
1468         \else
1469           #2%
1470           \expandafter\noexpand
1471           \csname##1\expandafter\expandafter\expandafter\endcsname
1472         \fi
1473       \fi
1474     }%
1475   }%
1476   \expandafter\x\csname <def>-command\expandafter\endcsname
1477     \csname <let>-command\endcsname
1478   \def\HyPsd@LetCommand#1{%
1479     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1480     \expandafter\expandafter\expandafter{%
1481       \expandafter\@gobble\string#1\@empty
1482     }%
1483   }

```

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).

```
1484 \def\HyPsd@ifnextchar#1{%
1485   \pdfstringdefWarn#1%
1486   \expandafter\@gobbletwo\@gobble
1487 }
```

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`.

```
1488 \def\HyPsd@protected@testopt#1{%
1489   \pdfstringdefWarn#1%
1490   \@gobbletwo
1491 }
```

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:

```
1492 \def\HyPsd@Warning#1{%
1493   \begingroup
1494   \let\space\ltx@space
1495   \Hy@Warning{#1}%
1496   \endgroup
1497 }
```

6.6.2 Protecting spaces

```
1498 \RequirePackage{etexcmds}[2007/09/09]
1499 \ifetex@unexpanded
1500   \expandafter\@secondoftwo
1501 \else
1502   \expandafter\@firstoftwo
1503 \fi
1504 {%
```

`\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`.

```
1505 \def\HyPsd@ProtectSpaces#1{%
1506   \iftrue
```

```

1507 \expandafter\HyPsd@@ProtectSpacesFi
1508 \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1509 \fi
1510 }%

```

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

```

1511 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1512 \fi
1513 \ifx\scrollmode#2\scrollmode
1514 \HyPsd@RemoveMask#1\HyPsd@End#3%
1515 \else
1516 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1517 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1518 \fi
1519 }%

```

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.

```

1520 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1521 \toks@{\expandafter{#1}}%
1522 \xdef#2{\the\toks@}%
1523 }%

1524 }{%
1525 \let\HyPsd@fi\fi
1526 \def\HyPsd@ProtectSpaces#1{%
1527 \xdef#1{%
1528 \iftrue
1529 \expandafter\HyPsd@@ProtectSpacesFi
1530 \expandafter|\expandafter\@empty#1| %
1531 \HyPsd@fi
1532 }%
1533 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1534 }%
1535 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1536 \fi
1537 \etex@unexpanded{#1}%
1538 \ifx\scrollmode#2\scrollmode
1539 \else
1540 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1541 \HyPsd@fi
1542 }%
1543 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1544 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1545 }%
1546 }

```

6.6.3 Remove grouping braces

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

```
1547 \def\HyPsd@RemoveBraces#1{%
1548   \ifx\scrollmode#1\scrollmode
1549   \else
1550     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1551   \fi
1552 }
```

`\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`.

```
1553 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1554   \fi
1555   \def\Hy@temp@A{#1#2}%
1556   \def\Hy@temp@B{#3}%
1557   \ifx\Hy@temp@A\Hy@temp@B
1558     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1559       \HyPsd@String#1%
1560     }%
1561     \ifx\scrollmode#2\scrollmode
1562     \else
1563       \Hy@ReturnAfterFiFiEnd{%
1564         \HyPsd@RemoveBraces{#2}%
1565       }%
1566     \fi
1567   \else
1568     \def\Hy@temp@A{#1}%
1569     \HyPsd@AppendItalcorr\HyPsd@String
1570     \ifx\Hy@temp@A\@empty
1571       \Hy@ReturnAfterElseFiFiEnd{%
1572         \HyPsd@RemoveBraces{#2}%
1573       }%
1574     \else
1575       \HyPsd@ProtectSpaces\Hy@temp@A
1576       \HyPsd@AppendItalcorr\Hy@temp@A
1577       \Hy@ReturnAfterFiFiEnd{%
1578         \expandafter\HyPsd@RemoveBraces\expandafter
1579         {\Hy@temp@A#2}%
1580       }%
1581     \fi
1582   \fi
1583   \Hy@ReturnEnd
1584 }
```

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

```

1585 \def\HyPsd@AppendItalcrr#1{%
1586   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/}#1%
1587 }
1588 \def\HyPsd@@AppendItalcrr#1#2{%
1589   \expandafter\def\expandafter#2\expandafter{#2#1}%
1590 }

```

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>.

```

1591 \ltx@ifundefined{directlua}{%
1592 }{%
1593   \expandafter\ifx\csname\endcsname\relax\fi
1594 }

```

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`.

```

1595 \begingroup
1596   \catcode`\Q=\active
1597   \let Q\ltx@empty
1598   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1599     \global\let\HyPsd@Rest\relax
1600     \ifcat\relax\noexpand#1\relax
1601       \ifx#1\protect
1602       \else
1603         \ifx#1\penalty
1604           \setbox\z@=\hbox{%
1605             \afterassignment\HyPsd@AfterCountRemove
1606             \count@=#2\HyPsd@end
1607           }%
1608         \else
1609           \ifx#1\kern
1610             \setbox\z@=\hbox{%
1611               \afterassignment\HyPsd@AfterDimenRemove
1612               \dimen@=#2\HyPsd@end
1613             }%

```

```

1614     \else
1615     \ifx#1\hskip
1616     \setbox\z@=\hbox{%
1617     \afterassignment\HyPsd@AfterSkipRemove
1618     \skip@=#2\HyPsd@end
1619     }%
1620     \else
1621     \HyPsd@CatcodeWarning{#1}%
1622     \fi
1623   \fi
1624 \fi
1625 \fi
1626 \else
1627 \ifcat\noexpand#1\noexpandQ% active character
1628 \expandafter\expandafter\expandafter\def
1629 \expandafter\expandafter\expandafter\HyPsd@String
1630 \expandafter\expandafter\expandafter{%
1631 \expandafter\HyPsd@String\string#1%
1632 }%
1633 \else
1634 \ifcat#1A% letter
1635 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1636 \HyPsd@String#1%
1637 }%
1638 \else
1639 \ifcat#1 % SPACE
1640 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1641 \HyPsd@String\HyPsd@SPACEOPTI
1642 }%
1643 \else
1644 \ifcat$#1%
1645 \HyPsd@CatcodeWarning{math shift}%
1646 \else
1647 \ifcat&#1%
1648 \HyPsd@CatcodeWarning{alignment tab}%
1649 \else
1650 \ifcat^#1%
1651 \HyPsd@CatcodeWarning{superscript}%
1652 \else
1653 \ifcat_#1%
1654 \HyPsd@CatcodeWarning{subscript}%
1655 \else
1656 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1657 \HyPsd@String#1%
1658 }%
1659 \fi
1660 \fi
1661 \fi
1662 \fi
1663 \fi
1664 \fi
1665 \fi
1666 \fi
1667 \ifx\HyPsd@Rest\relax

```



```

1668 \ifx\scrollmode#2\scrollmode
1669 \else
1670 \Hy@ReturnAfterFiFiEnd{%
1671 \HyPsd@CheckCatcodes#2\HyPsd@End
1672 }%
1673 \fi
1674 \else
1675 \ifx\HyPsd@Rest\@empty
1676 \else
1677 \Hy@ReturnAfterFiFiEnd{%
1678 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1679 }%
1680 \fi
1681 \fi
1682 \Hy@ReturnEnd
1683 }%
1684 \endgroup

```

Remove counts, dimens, skips.

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

```

1685 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1686 \gdef\HyPsd@Rest{#1}%
1687 }

```

`\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.

```

1688 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1689 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@<\fi>1ex %
1690 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1691 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1692 \else
1693 \ifdim\dimen@=\z@
1694 \else
1695 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1696 \fi
1697 \gdef\HyPsd@Rest{#1}%
1698 \fi
1699 }

```

`\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).

```

1700 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1701 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@<\fi>1ex %
1702 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1703 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1704 \else
1705 \ifdim\skip@=\z@
1706 \else
1707 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1708 \fi

```

```

1709 \gdef\HyPsd@Rest{#1}%
1710 \fi
1711 }

```

Catcode warnings.

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

```

1712 \def\HyPsd@CatcodeWarning#1{%
1713 \HyPsd@Warning{%
1714 Token not allowed in a PDF string (%)
1715 \ifHy@unicode
1716 Unicode%
1717 \else
1718 PDFDocEncoding%
1719 \fi
1720 }:%
1721 \MessageBreak removing `\'HyPsd@RemoveCmdPrefix#1'%
1722 }%
1723 }
1724 \begingroup
1725 \catcode`\|=0 %
1726 \catcode`\|=12 %
1727 |gdef|HyPsd@RemoveCmdPrefix#1{%
1728 |expandafter|HyPsd@@RemoveCmdPrefix
1729 |string#1|@empty\<>-|@empty|@empty
1730 }%
1731 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1732 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1733 \def\HyPsd@RemoveSpaceWarning#1{%
1734 \HyPsd@Warning{%
1735 Token not allowed in a PDF string (%)
1736 \ifHy@unicode
1737 Unicode%
1738 \else
1739 PDFDocEncoding%
1740 \fi
1741 }:%
1742 \MessageBreak #1\MessageBreak
1743 removed%
1744 }%
1745 }

```

\HyPsd@ReplaceSpaceWarning

```

1746 \def\HyPsd@ReplaceSpaceWarning#1{%
1747 \HyPsd@Warning{%
1748 Token not allowed in a PDF string (%)
1749 \ifHy@unicode
1750 Unicode%
1751 \else
1752 PDFDocEncoding%
1753 \fi
1754 }:%

```

```

1755 \MessageBreak #1\MessageBreak
1756 replaced by space%
1757 }%
1758 }

```

6.6.5 Check for wrong glyphs

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

```

1759 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1760 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1761 \HyPsd@String#1%
1762 }%
1763 \ifx\\#2\\%
1764 \else
1765 \ltx@ReturnAfterFi{%
1766 \HyPsd@GlyphProcessWarning#2\@empty
1767 }%
1768 \fi
1769 }
1770 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1771 \HyPsd@@@GlyphProcessWarning#1++>%
1772 \HyPsd@GlyphProcess#2\@empty
1773 }
1774 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1775 \ifx\\#2\\%
1776 \HyPsd@Warning{%
1777 Glyph not defined in %
1778 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1779 removing ` \@backslashchar#1'%
1780 }%
1781 \else
1782 \HyPsd@Warning{%
1783 Composite letter ` \@backslashchar#1+#2'\MessageBreak
1784 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1785 \MessageBreak
1786 removing ` \@backslashchar#1'%
1787 }%
1788 \fi
1789 }

```

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`.

```

1790 \def\HyPsd@spaceopti#1{ % first space
1791 \ifx\HyPsd@spaceopti#1%
1792 \040%
1793 \else
1794 #1%
1795 \fi

```

```
1796 }%
```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a 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.
1797 \def\HyPsd@Subst#1#2#3{%
1798   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1799     \fi
1800     ##1%
1801     \ifx\scrollmode##2\scrollmode
1802     \else
1803       #2%
1804     \HyPsd@@@ReplaceFi##2\END
1805     \fi
1806   }%
1807   \xdef#3{%
1808     \iftrue
1809       \expandafter\HyPsd@@@ReplaceFi#3#1\END
1810     \fi
1811   }%
1812 }
```

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

```
1813 \def\HyPsd@StringSubst#1{%
1814   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1815 }
```

`\HyPsd@EscapeTeX`

```
1816 \begingroup
1817 \lccode`\!=`\\%%
1818 \lccode`\|=`\\%%
1819 \lccode`\(=`\{%
1820 \lccode`\)=`\}%
1821 \lccode`0=\ltx@zero
1822 \lccode`1=\ltx@zero
1823 \lccode`3=\ltx@zero
1824 \lccode`4=\ltx@zero
1825 \lccode`5=\ltx@zero
1826 \lccode`7=\ltx@zero
1827 \lowercase{\endgroup
1828   \def\HyPsd@EscapeTeX#1{%
1829     \HyPsd@Subst!{|045}#1%
1830     \HyPsd@Subst({|173}#1%
1831     \HyPsd@Subst){|175}#1%
1832   }%
1833 }
```

6.6.7 Support for package xspace

\HyPsd@doxspace \xspace does not work, because it uses a \futurelet that cannot be executed in T_EX'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.

```

1834 \def\HyPsd@doxspace#1{%
1835   \ifx#1\relax\else
1836   \ifx#1.\else
1837   \ifx#1:\else
1838   \ifx#1,\else
1839   \ifx#1;\else
1840   \ifx#1!\else
1841   \ifx#1?\else
1842   \ifx#1/\else
1843   \ifx#1-\else
1844   \ifx#1'\else
1845     \HyPsd@SPACEOPTI
1846   \fi
1847   \fi
1848   \fi
1849   \fi
1850   \fi
1851   \fi
1852   \fi
1853   \fi
1854   \fi
1855   \fi
1856   #1%
1857 }%
```

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.

```

1858 \begingroup
1859 \catcode`\|=0 %
1860 \catcode`\|=12 %
```

\HyPsd@ConvertToUnicode

```

1861 |gdef|HyPsd@ConvertToUnicode#1{%
1862   |xdef#1{%
1863     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1864   }%
1865   |ifx#1|@empty
1866   |else
1867     |xdef#1{%
1868       \376\377%
1869       #1%
1870     }%
1871   |fi
1872 }%
```

\HyPsd@DoConvert

```

1873 |gdef|HyPsd@DoConvert#1{%
1874   |ifx#1|@empty
1875   |else
1876     |ltx@ReturnAfterFi{%
1877       |ifx#1\%%
1878       \%%
1879       |expandafter|HyPsd@DoEscape
1880     |else
1881       |HyPsd@Char{#1}%
1882       |expandafter|HyPsd@DoConvert
1883     |fi
1884   }%
1885 |fi
1886 }%

```

\HyPsd@DoEscape

```

1887 |gdef|HyPsd@DoEscape#1{%
1888   |ifx#19%
1889   |expandafter|HyPsd@GetTwoBytes
1890   |else
1891     |ltx@ReturnAfterFi{%
1892       |ifx#18%
1893       00%
1894       |expandafter|HyPsd@GetTwoBytes
1895     |else
1896       #1%
1897       |expandafter|HyPsd@GetOneByte
1898     |fi
1899   }%
1900 |fi
1901 }%

```

\HyPsd@GetTwoBytes

```

1902 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1903   #1\#2#3#4%
1904   |HyPsd@DoConvert
1905 }%

```

\HyPsd@GetOneByte

```

1906 |gdef|HyPsd@GetOneByte#1#2{%
1907   #1#2%
1908   |HyPsd@DoConvert
1909 }%
1910 |endgroup

```

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

```

1911 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1912   \xdef#4{#4#1#2}%
1913   \HyPsd@@ConvertToUnicode#3\END#4%
1914 }

```

\HyPsd@Char

```
1915 \begingroup
1916 \catcode0=9 %
1917 \catcode`\^=7 %
1918 \catcode`\^^=12 %
1919 \def\x{~~~~0000}%
1920 \expandafter\endgroup
1921 \ifx\x\@empty
1922 \def\HyPsd@Char#1{%
1923 \ifnum`#1<128 %
1924 \catcode\char 000#1%
1925 \else
1926 \ifnum`#1<65536 %
1927 \expandafter\HyPsd@CharTwoByte\number`#1%
1928 \else
1929 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1930 \intcalcSub{`#1}{65536}!%
1931 \fi
1932 \fi
1933 }%
1934 \def\HyPsd@CharTwoByte#1{%
1935 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1936 \IntCalcDiv#1!256!%
1937 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1938 \IntCalcMod#1!256!%
1939 }%
1940 \def\HyPsd@CharOctByte#1{%
1941 \catcode\char
1942 \IntCalcDiv#1!64!%
1943 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1944 \IntCalcMod#1!8!%
1945 }%
1946 \def\HyPsd@CharSurrogate#1{%
1947 \catcode\char 33%
1948 \IntCalcDiv#1!262144!%
1949 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1950 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1951 \catcode\char 33%
1952 \expandafter\expandafter\expandafter\IntCalcAdd
1953 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1954 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1955 \IntCalcMod#1!256!%
1956 }%
1957 \else
1958 \def\HyPsd@Char#1{%
1959 \catcode\char 000#1%
1960 }%
1961 \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

1962 \begingroup\expandafter\expandafter\expandafter\endgroup
1963 \expandafter\ifx\csname numexpr\endcsname\relax
1964   \let\HyPsd@UTFviii\relax
1965 \else
1966   \begingroup
1967     \lccode`\~=\^^f4\relax
1968   \lowercase{\endgroup
1969     \def\HyPsd@UTFviii{%
1970       \let\UTFviii@two@octets\HyPsd@UTFviii@two
1971       \let\UTFviii@three@octets\HyPsd@UTFviii@three
1972       \let\UTFviii@four@octets\HyPsd@UTFviii@four
1973       \ifx~\HyPsd@UTFviii@cccxiv@undef
1974         \let~\HyPsd@UTFviii@cccxiv@def
1975       \fi
1976       \let\unichar\HyPsd@unichar
1977     }%
1978   }%
1979   \def\HyPsd@UTFviii@cccxiv@undef{\@inpc@undefined@{utf8}}%
1980   \edef\HyPsd@UTFviii@cccxiv@def{%
1981     \noexpand\UTFviii@four@octets\string ~^f4%
1982   }%

```

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.

$$\begin{aligned}
 a &:= A/4 - 48 & (1) \\
 b &:= A - 4 * (A/4) & (2) \\
 c &:= B/8 - 8 * ((8 * (B/8))/8) & (3) \\
 d &:= B - 8 * (B/8) & (4) \\
 & & (5)
 \end{aligned}$$

```

1983 \def\HyPsd@UTFviii@two#1#2{%
1984   \expandafter\HyPsd@UTFviii@two
1985   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|%
1986   \number`#1\expandafter|%
1987   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|%
1988   \number`#2 \@nil
1989 }%
1990 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1991   \expandafter\8%
1992   \number\numexpr #1-48\expandafter\relax
1993   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1994   \number\numexpr #3-8*%
1995   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1996   \number\numexpr #4-8*#3\relax

```


1997 }%

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

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

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

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

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

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

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

$$(12)$$

```

1998 \def\HyPsd@UTFviii@three#1#2#3{%
1999 \expandafter\HyPsd@UTFviii@@three
2000 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2001 \number`#1\expandafter|
2002 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
2003 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
2004 \number`#2\expandafter|
2005 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
2006 \number`#3 \@nil
2007 }%
2008 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2009 \expandafter\9%
2010 \number\numexpr #1-56\expandafter\relax
2011 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2012 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2013 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2014 \number\numexpr #6-16\expandafter\relax
2015 \number\numexpr #7-8*#6\relax
2016 }%
```

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

```

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

```

2017 \def\HyPsd@UTFviii@four#1#2{%
2018 \expandafter\HyPsd@@UTFviii@four\number
2019 \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2020 \expandafter|\number
2021 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2022 }%
2023 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2024 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2025 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2026 \ifodd#2 %
2027 \number\numexpr(#2-1)/2\relax
2028 \else
2029 \number\numexpr#2/2\relax
```

```

2030 \fi
2031 \number\numexpr\ifodd#2 4+\fi
2032 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2033 \933%
2034 \expandafter\HyPsd@@@UTFviii@four\number
2035 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2036 }%
2037 \def\HyPsd@@@UTFviii@four#1|#2{%
2038 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2039 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2040 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2041 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2042 }%

```

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

```

2043 \def\HyPsd@unichar#1{%
2044 \ifHy@unicode
2045 \ifnum#1>"10FFFF %
2046 \HyPsd@UnicodeReplacementCharacter % illegal
2047 \else
2048 \ifnum#1>"FFFF %

```

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

```

2049 \expandafter\HyPsd@unichar\expandafter{%
2050 \number\numexpr 55296+%
2051 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2052 \relax\relax\relax
2053 }%

```

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

```

2054 \expandafter\HyPsd@unichar\expandafter{%
2055 \number\numexpr#1-9216%
2056 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2057 \relax\relax\relax
2058 }%
2059 \else
2060 \ifnum#1>"7FFF %
2061 \9%
2062 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2063 \number
2064 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2065 }%
2066 \else
2067 \8%
2068 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2069 \fi
2070 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2071 \number
2072 \numexpr#1-256*\number
2073 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2074 }%
2075 \fi
2076 \fi
2077 \else

```

```

2078 .% unsupported (Unicode -> PDF Doc Encoding)
2079 \fi
2080 }%
2081 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2082 \def\HyPsd@unichar@first@byte#1{%
2083   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2084   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2085     \number
2086     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2087     \relax\relax\relax
2088   }%
2089 }%
2090 \def\HyPsd@unichar@second@byte#1{%
2091   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2092   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2093     \number
2094     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2095     \relax\relax\relax
2096   }%
2097 }%
2098 \def\HyPsd@unichar@octtwo#1{%
2099   \number\dimexpr.125\dimexpr#1sp\relax\relax
2100   \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2101   \relax\relax\relax
2102 }%
2103 \fi

```

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

```

2104 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2105   \ifx\@gobble#1%
2106   \else
2107     [Please insert \textbackslash PrerenderUnicode%
2108     \textbraceleft#1\textbraceright\space
2109     into preamble]%
2110   \fi
2111 }%

```

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

\HyPsd@DieFace Die faces are provided by

| Package | Macro |
|---------|----------|
| ifsym | \Cube |
| epsdice | \epsdice |
| hhcount | \fcdice |

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

```

2112 \def\HyPsd@DieFace#1{%
2113   \ifHy@unicode
2114   \ifnum#1<1 %
2115     \HyPsd@UnicodeReplacementCharacter

```

```

2116 \else
2117 \ifnum#1>6 %
2118 \9046\205%
2119 \expandafter\expandafter\expandafter
2120 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2121 \else
2122 \9046\20\intcalcDec{#1}%
2123 \fi
2124 \fi
2125 \else
2126 .% Die faces are not part of PDFDocEncoding
2127 \fi
2128 }

```

\HyPsd@DieFaceLarge

```

2129 \def\HyPsd@DieFaceLarge#1{%
2130 \ifnum#1>6 %
2131 \expandafter\ltx@firstoftwo
2132 \else
2133 \expandafter\ltx@secondoftwo
2134 \fi
2135 {%
2136 \9046\205%
2137 \expandafter\expandafter\expandafter
2138 \HyPsd@DieFaceLarge\IntCalcSub#1{6}!!%
2139 }{%
2140 \9046\20\IntCalcDec#1!%
2141 }%
2142 }

```

6.6.11 Support for moon phases of package china2e

```

2143 \def\HyPsd@MoonPha#1{%
2144 \ifcase\intcalcNum{#1} %
2145 \HyPsd@UnicodeReplacementCharacter
2146 \or % 1
2147 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2148 \9330\074\9337\032%
2149 \or % 2
2150 \HyPsd@UnicodeReplacementCharacter
2151 \or % 3
2152 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2153 \9330\074\9337\035%
2154 \or % 4
2155 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2156 \9330\074\9337\034%
2157 \else
2158 \HyPsd@UnicodeReplacementCharacter
2159 \fi
2160 }
2161 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2162 \def\HyPsd@ding#1{%
2163   \ifHy@unicode
2164     \ifnum#1<32 %
2165       \HyPsd@UnicodeReplacementCharacter
2166     \else
2167       \ifnum#1>254 %
2168         \HyPsd@UnicodeReplacementCharacter
2169       \else
2170         \ifnum#1<127 %
2171           \expandafter\expandafter\expandafter
2172             \HyPsd@@ding\intcalcNum{#1}!%
2173         \else
2174           \ifnum#1>160 %
2175             \expandafter\expandafter\expandafter
2176               \HyPsd@@ding\intcalcNum{#1}!%
2177           \else
2178             \HyPsd@UnicodeReplacementCharacter
2179           \fi
2180         \fi
2181       \fi
2182     \fi
2183   \else
2184     .% Dingbats are not part of PDFDocEncoding
2185   \fi
2186 }

```

\HyPsd@@ding

```

2187 \def\HyPsd@@ding#1!{%
2188   \ltx@ifundefined{HyPsd@ding@#1}{%
2189     \ifnum#1<127 %
2190       \9047%
2191       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2192     \else
2193       \ifnum#1<168 %
2194         \9047\14\IntCalcSub#1!160!%
2195       \else
2196         \ifnum#1>181 %
2197           \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2198         \else
2199           % 172..181 -> U+2460..U+2469
2200           \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2201         \fi
2202       \fi
2203     \fi
2204   }{%
2205     \csname HyPsd@ding@#1\endcsname
2206   }%
2207 }

2208 \@namedef{HyPsd@ding@32}{\space}
2209 % U+260E BLACK TELEPHONE
2210 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2211 % U+261B BLACK RIGHT POINTING INDEX
2212 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B

```

```

2213 % U+261E WHITE RIGHT POINTING INDEX
2214 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2215 % U+2605 BLACK STAR
2216 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2217 % U+25CF BLACK CIRCLE
2218 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2219 % U+25A0 BLACK SQUARE
2220 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2221 % U+25B2 BLACK UP-POINTING TRIANGLE
2222 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2223 % U+25BC BLACK DOWN-POINTING TRIANGLE
2224 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2225 % U+25C6 BLACK DIAMOND
2226 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2227 % U+25D7 RIGHT HALF BLACK CIRCLE
2228 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2229 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2230 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2231 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2232 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2233 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2234 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2235 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2236 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2237 \@ifclassloaded{memoir}{%
2238   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2239 }{}

```

7.2 Package subfigure

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

```

2240 \@ifpackageloaded{subfigure}{%
2241   \ltx@ifundefined{sub@label}{%
2242     \Hy@hypertextnamesfalse
2243   }{%
2244     \renewcommand*{\sub@label}[1]{%
2245       \@bsphack
2246       \subfig@oldlabel{#1}%
2247       \if@filesw
2248         \begingroup
2249         \edef\@currentlabstr{%
2250           \expandafter\strip@prefix\meaning\@currentlabelname
2251         }%
2252         \protected@write\@auxout{}{%
2253           \string\newlabel{sub@#1}{%
2254             {\@nameuse{@@thesub\@capttype}}%
2255             {\thepage}%
2256             {%
2257               \expandafter\strip@period\@currentlabstr

```

```

2258         \relax.\relax\@@@%
2259     }%
2260     {\@currentHref}%
2261     {}%
2262 }%
2263 }%
2264 \endgroup
2265 \fi
2266 \@esphack
2267 }%
2268 \@ifpackagelater{subfigure}{2002/03/26}{\%
2269     \providecommand*\toclevel@subfigure{1}%
2270     \providecommand*\toclevel@subtable{1}%
2271 }%
2272 }%
2273 }{}

```

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:

```

2274 \ltx@ifundefined{XR@addURL}{%
2275 }{%

```

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.

```

2276 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2277 \def\xr@dURL#1#2#3#4#5\\{%
2278     {#1}{#2}%
2279     \if!#4!%
2280     \else
2281         {#3}{#4}{\xr@URL}%
2282     \fi
2283 }%
2284 }

2285 \def\Hy@true{true}
2286 \def\Hy@false{false}

    Providing dummy definitions.

2287 \let\literalps@out\@gobble
2288 \newcommand\pdfbookmark[3][]{ }
2289 \def\Acrobatmenu#1#2{\leavevmode#2}
2290 \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

```
2291 \let\HyperRaiseLinkHook\@empty
2292 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2293 \newcount\Hy@SavedSpaceFactor
2294 \def\Hy@SaveSpaceFactor{%
2295   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2296 }
2297 \def\Hy@RestoreSpaceFactor{%
2298   \relax
2299   \ifhmode
2300     \ifnum\Hy@SavedSpaceFactor>\z@
2301       \spacefactor=\Hy@SavedSpaceFactor
2302     \fi
2303   \fi
2304 }
2305 \def\Hy@SaveSavedSpaceFactor{%
2306   \edef\Hy@RestoreSavedSpaceFactor{%
2307     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2308   }%
2309 }
2310 \def\Hy@raisedlink#1{%
2311   \ifvmode
2312     #1%
2313   \else
2314     \Hy@SaveSpaceFactor
2315     \penalty\@M
2316     \smash{%
2317       \begingroup
2318         \let\HyperRaiseLinkLength\@tempdima
2319         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2320         \HyperRaiseLinkHook
2321       \expandafter\endgroup
2322       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2323         \Hy@RestoreSpaceFactor
2324         #1%
2325         \Hy@SaveSpaceFactor
2326       }%
2327     }%
2328     \Hy@RestoreSpaceFactor
2329   \fi
2330 }
```

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

```
\Hy@RestoreLastskip 2331 \def\Hy@SaveLastskip{%
2332   \let\Hy@RestoreLastskip\relax
2333   \ifvmode
2334     \ifdim\lastskip=\z@
2335       \ifnum\lastnodetype=11 %
2336         \let\Hy@RestoreLastskip\nobreak
```



```

2337 \else
2338 \let\Hy@RestoreLastskip\relax
2339 \fi
2340 \else
2341 \begingroup
2342 \skip@=-\lastskip
2343 \edef\x{%
2344 \endgroup
2345 \def\noexpand\Hy@RestoreLastskip{%
2346 \noexpand\ifvmode
2347 \noexpand\nobreak
2348 \vskip\the\skip@
2349 \vskip\the\lastskip\relax
2350 \noexpand\fi
2351 }%
2352 }%
2353 \x
2354 \fi
2355 \else
2356 \ifhmode
2357 \ifdim\lastskip=\z@
2358 \let\Hy@RestoreLastskip\nobreak
2359 \else
2360 \begingroup
2361 \skip@=-\lastskip
2362 \edef\x{%
2363 \endgroup
2364 \def\noexpand\Hy@RestoreLastskip{%
2365 \noexpand\ifhmode
2366 \noexpand\nobreak
2367 \hskip\the\skip@
2368 \hskip\the\lastskip\relax
2369 \noexpand\fi
2370 }%
2371 }%
2372 \x
2373 \fi
2374 \fi
2375 \fi
2376 }%

```

9 Options

```

2377 \SetupKeyvalOptions{%
2378 family=Hyp,%
2379 prefix=HyOpt%
2380 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2381 \def\IfHyperBooleanExists#1{%
2382 \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2383 \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo

```

```

2384 }%
2385 }

2386 \@namedef{KV@Hyp@stoppeearly@default}{}

```

\IfHyperBoolean

```

2387 \def\IfHyperBoolean#1{%
2388   \IfHyperBooleanExists{#1}{%
2389     \csname ifHy@#1\endcsname
2390     \expandafter\ltx@firstoftwo
2391   \else
2392     \expandafter\ltx@secondoftwo
2393   \fi
2394 } \ltx@secondoftwo
2395 }

```

\Hy@boolkey

```

2396 \def\Hy@boolkey#1#2{%
2397   \edef\Hy@tempa{#2}%
2398   \lowercase\expandafter{%
2399     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2400   }%
2401   \ifx\Hy@tempa\@empty
2402     \let\Hy@tempa\Hy@true
2403   \fi
2404   \ifx\Hy@tempa\Hy@true
2405     \else
2406     \ifx\Hy@tempa\Hy@false
2407       \else
2408         \let\Hy@tempa\relax
2409       \fi
2410     \fi
2411     \ifx\Hy@tempa\relax
2412       \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2413     \else
2414       \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2415       \csname Hy@#1\Hy@tempa\endcsname
2416     \fi
2417 }

```

\Hy@WarnOptionValue

```

2418 \def\Hy@WarnOptionValue#1#2#3{%
2419   \Hy@Warning{%
2420     Unexpected value `#1'\MessageBreak
2421     of option `#2' instead of\MessageBreak
2422     #3%
2423   }%
2424 }

```

\Hy@DisableOption

```

2425 \def\Hy@DisableOption#1{%
2426   \ltx@ifundefined{KV@Hyp@#1@default}{}%
2427   \define@key{Hyp}{#1}%
2428 }{}%

```

```

2429 \define@key{Hyp}{#1}[]%
2430 }%
2431 {\Hy@WarnOptionDisabled{#1}}%
2432 }
2433

```

`\Hy@WarnOptionDisabled`

```

2434 \def\Hy@WarnOptionDisabled#1{%
2435 \Hy@Warning{%
2436 Option `#1' has already been used,\MessageBreak
2437 setting the option has no effect%
2438 }%
2439 }

```

`\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`.

```

2440 \def\Hy@CheckOptionValue#1#2#3{%
2441 \begingroup
2442 \edef\x{#1}%
2443 \@onelevel@sanitize\x
2444 \let\y=y%
2445 \def\do##1##2{%
2446 \def\z{##1}%
2447 \@onelevel@sanitize\z
2448 \ifx\x\z
2449 \let\y=n%
2450 \let\do\@gobbletwo
2451 \fi
2452 }%
2453 #3%
2454 \ifx\y y%
2455 \def\do##1##2{%
2456 * `##1'%
2457 \ifx\##2\\\else\space(##2)\fi
2458 \MessageBreak
2459 }%
2460 \Hy@Warning{%
2461 Values of option `#2':\MessageBreak
2462 #3%
2463 * An empty value disables the option.\MessageBreak
2464 Unknown value `x'%
2465 }%
2466 \fi
2467 \endgroup
2468 }

```

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

```

2469 \def\Hy@DefNameKey#1{%
2470 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2471 }

```

```

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

2472 \def\Hy@@DefNameKey#1#2#3{%
2473   \define@key{Hyp}{#2}{%
2474     \edef#1{##1}%
2475     \ifx#1\@empty
2476       \else
2477         \Hy@CheckOptionValue{##1}{#2}{#3}%
2478       \fi
2479   }%
2480   \let#1\@empty
2481 }

\Hy@UseNameKey

2482 \def\Hy@UseNameKey#1#2{%
2483   \ifx#2\@empty
2484     \else
2485       /#1/#2%
2486     \fi
2487 }

```

9.2 Defining the options

```

2488 \define@key{Hyp}{implicit}[true]{%
2489   \Hy@boolkey{implicit}{#1}%
2490 }
2491 \define@key{Hyp}{draft}[true]{%
2492   \Hy@boolkey{draft}{#1}%
2493 }
2494 \define@key{Hyp}{final}[true]{%
2495   \Hy@boolkey{final}{#1}%
2496 }
2497 \let\KV@Hyp@nolinks\KV@Hyp@draft

2498 \def\Hy@ObsoletePaperOption#1{%
2499   \Hy@WarningNoLine{%
2500     Option `#1' is no longer used%
2501   }%
2502   \define@key{Hyp}{#1}[true]{}%
2503 }
2504 \def\Hy@temp#1{%
2505   \define@key{Hyp}{#1}[true]{%
2506     \Hy@ObsoletePaperOption{#1}%
2507   }%
2508 }
2509 \Hy@temp{a4paper}
2510 \Hy@temp{a5paper}
2511 \Hy@temp{b5paper}
2512 \Hy@temp{letterpaper}
2513 \Hy@temp{legalpaper}
2514 \Hy@temp{executivepaper}

2515 \define@key{Hyp}{setpagesize}[true]{%
2516   \Hy@boolkey{setpagesize}{#1}%

```

```

2517 }
2518 \define@key{Hyp}{debug}[true]{%
2519   \Hy@boolkey{debug}{#1}%
2520 }
2521 \define@key{Hyp}{linktocpage}[true]{%
2522   \Hy@boolkey{linktocpage}{#1}%
2523   \ifHy@linktocpage
2524     \let\Hy@linktoc\Hy@linktoc@page
2525   \else
2526     \let\Hy@linktoc\Hy@linktoc@section
2527   \fi
2528 }
2529 \chardef\Hy@linktoc@none=0 %
2530 \chardef\Hy@linktoc@section=1 %
2531 \chardef\Hy@linktoc@page=2 %
2532 \chardef\Hy@linktoc@all=3 %
2533 \ifHy@linktocpage
2534   \let\Hy@linktoc\Hy@linktoc@page
2535 \else
2536   \let\Hy@linktoc\Hy@linktoc@section
2537 \fi
2538 \define@key{Hyp}{linktoc}{%
2539   \@ifundefined{Hy@linktoc@#1}{%
2540     \Hy@Warning{%
2541       Unexpected value `#1' of\MessageBreak
2542       option `linktoc' instead of `none',\MessageBreak
2543       `section', `page' or `all'%
2544     }%
2545   }{%
2546     \expandafter\let\expandafter\Hy@linktoc
2547     \csname Hy@linktoc@#1\endcsname
2548   }%
2549 }
2550 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2551 \let\XR@ext\relax
2552 \define@key{Hyp}{verbose}[true]{%
2553   \Hy@boolkey{verbose}{#1}%
2554 }
2555 \define@key{Hyp}{typexml}[true]{%
2556   \Hy@boolkey{typexml}{#1}%
2557 }

```

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.

```

2558 \define@key{Hyp}{raiselinks}[true]{%
2559   \Hy@boolkey{raiselinks}{#1}%
2560 }

```

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

```

2561 \def\Hy@setbreaklinks#1{%
2562   \csname breaklinks#1\endcsname
2563 }
2564 \def\Hy@breaklinks@unsupported{%

```

```

2565 \ifx\Hy@setbreaklinks\@gobble
2566 \ifHy@breaklinks
2567 \Hy@WarningNoLine{%
2568   You have enabled option `breaklinks'.\MessageBreak
2569   But driver ``\Hy@driver.def' does not support this.\MessageBreak
2570   Expect trouble with the link areas of broken links%
2571 }%
2572 \fi
2573 \fi
2574 }

2575 \define@key{Hyp}{breaklinks}[true]{%
2576 \Hy@boolkey{breaklinks}{#1}%
2577 \let\Hy@setbreaklinks\@gobble
2578 }

2579 \define@key{Hyp}{localanchorname}[true]{%
2580 \Hy@boolkey{localanchorname}{#1}%
2581 }

Determines whether an automatic anchor is put on each page
2582 \define@key{Hyp}{pageanchor}[true]{%
2583 \Hy@boolkey{pageanchor}{#1}%
2584 }

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.
2585 \define@key{Hyp}{plainpages}[true]{%
2586 \Hy@boolkey{plainpages}{#1}%
2587 }

Are the names for anchors made as per the HyperTeX system, or do they simply
use what LATEX provides?
2588 \define@key{Hyp}{naturalnames}[true]{%
2589 \Hy@boolkey{naturalnames}{#1}%
2590 }

Completely ignore the names as per the HyperTeX system, and use unique coun-
ters.
2591 \define@key{Hyp}{hypertexnames}[true]{%
2592 \Hy@boolkey{hypertexnames}{#1}%
2593 }

Currently, dvips doesn't allow anchors nested within targets, so this option tries
to stop that happening. Other processors may be able to cope.
2594 \define@key{Hyp}{nesting}[true]{%
2595 \Hy@boolkey{nesting}{#1}%
2596 }

2597 \define@key{Hyp}{destlabel}[true]{%
2598 \Hy@boolkey{destlabel}{#1}%
2599 }

2600 \define@key{Hyp}{unicode}[true]{%
2601 \Hy@boolkey{unicode}{#1}%
2602 \ifHy@unicode
2603 \def\HyPsd@pdfencoding{unicode}%
2604 \HyPsd@LoadUnicode
2605 \else

```

```

2606 \def\HyPsd@pdfencoding{pdfdoc}%
2607 \fi
2608 }
2609 \Hy@AtBeginDocument{%
2610 \ifx\HyPsd@LoadUnicode\relax
2611 \else
2612 \def\HyPsd@LoadUnicode{%
2613 \Hy@Error{%
2614 Unicode support for bookmarks is not available.\MessageBreak
2615 Activate unicode support by using one of the options\MessageBreak
2616 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2617 in the preamble%
2618 } \@ehc
2619 \global\let\HyPsd@LoadUnicode\relax
2620 \global\Hy@unicodedefalse
2621 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2622 }%
2623 \fi
2624 }

2625 \define@key{Hyp}{pdfencoding}{%
2626 \edef\HyPsd@temp{#1}%
2627 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2628 \let\HyPsd@pdfencoding\HyPsd@temp
2629 \Hy@unicodedefalse
2630 \else
2631 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2632 \z@
2633 \else
2634 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2635 \z@
2636 \else
2637 \@ne
2638 \fi
2639 \fi
2640 \let\HyPsd@pdfencoding\HyPsd@temp
2641 \hypersetup{unicode}%
2642 \ifHy@unicode
2643 \def\HyPsd@pdfencoding{#1}%
2644 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2645 \HyPsd@LoadStringEncoding
2646 \fi
2647 \else
2648 \Hy@Warning{Cannot switch to unicode bookmarks}%
2649 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2650 \fi
2651 \else
2652 \@onelevel@sanitize\HyPsd@temp
2653 \Hy@Warning{%
2654 Values of option `pdfencoding':\MessageBreak
2655 `pdfdoc', `unicode', `auto'.\MessageBreak
2656 Ignoring unknown value ``\HyPsd@temp'%
2657 }%
2658 \fi
2659 \fi

```

```

2660 }
2661 \def\HyPsd@pdfencoding@auto{auto}
2662 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2663 \def\HyPsd@pdfencoding@unicode{unicode}

change 2020-08-14, use unicode by default:
2664 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2665 \HyPsd@LoadUnicode
2666 \def\HyPsd@LoadStringEnc{%
2667   \RequirePackage{stringenc}[2009/12/15]%
2668   \let\HyPsd@LoadStringEnc\relax
2669 }
2670 \Hy@AtBeginDocument{%
2671   \@ifpackageloaded{stringenc}{%
2672     \let\HyPsd@LoadStringEnc\relax
2673   }{%
2674     \def\HyPsd@LoadStringEnc{%
2675       \Hy@WarningNoLine{%
2676         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2677         in the preamble or load the package there%
2678       }%
2679     }%
2680   }%
2681 }

2682 \define@key{Hyp}{psdextra}[true]{%
2683   \Hy@boolkey{psdextra}{#1}%
2684   \HyPsd@LoadExtra
2685 }

2686 \def\hypersetup{\kvsetkeys{Hyp}}

2687 \newif\ifHy@setpdfversion
2688 \define@key{Hyp}{pdfversion}{%
2689   \@ifundefined{Hy@pdfversion@#1}{%
2690     \PackageWarning{hyperref}{%
2691       Unsupported PDF version `#1'.\MessageBreak
2692       Valid values: 1.2-1.7, 2.0%
2693     }%
2694   }{%
2695     \Hy@setpdfversiontrue
2696     \@nameuse{Hy@pdfversion@#1}%
2697   }%
2698 }

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or
\pdfvariable majorversion} so introduce new names here.
2699 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{2}}%
2700 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{3}}%
2701 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{4}}%
2702 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{5}}%
2703 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{6}}%

```



```

2704 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{7}}%
2705 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
norversion{0}}%
2706 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```

2707 \let\Hy@pdfversion\Hy@pdf@minorversion
2708 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
norversion\relax}
2709 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
norversion\relax}

```

if `pdfminorversion` is defined, make sure `pdfmajorversion` is too.

```

2710 \@ifundefined{pdfminorversion}{}{%
2711 \@ifundefined{pdfmajorversion}{}{%
2712 \newcount\pdfmajorversion
2713 \pdfmajorversion=1
2714 }-}%
2715 }
2716 \ifx\pdfmajorversion\@undefined\else
2717 \def\Hy@pdfmajorversion{\pdfmajorversion}
2718 \fi

```

10 Options for different drivers

```

2719 \newif\ifHy@DviMode
2720 \let\Hy@DviErrMsg\ltx@empty
2721 \ifpdf
2722 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2723 \else
2724 \ifxetex
2725 \def\Hy@DviErrMsg{XeTeX is running}%
2726 \else
2727 \ifvtex
2728 \ifnum\OpMode=\z@
2729 \Hy@DviModetrue
2730 \else
2731 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2732 \fi
2733 \else
2734 \Hy@DviModetrue
2735 \fi
2736 \fi
2737 \fi
2738 \def\HyOpt@CheckDvi#1{%
2739 \ifHy@DviMode
2740 \expandafter\ltx@firstofone
2741 \else
2742 \Hy@Error{%
2743 Wrong DVI mode driver option `#1',\MessageBreak
2744 because \Hy@DviErrMsg
2745 }@\ehc
2746 \expandafter\ltx@gobble
2747 \fi
2748 }

```

```

2749 \DeclareVoidOption{tex4ht}{%
2750   \Hy@texhttrue
2751   \kvsetkeys{Hyp}{colorlinks=true}%
2752   \def\BeforeTeXIVht{\RequirePackage{color}}}%
2753   \def\Hy@driver{htex4ht}%
2754   \def\MaybeStopEarly{%
2755     \Hy@Message{Stopped early}%
2756     \Hy@AtBeginDocument{%
2757       \PDF@FinishDoc
2758       \gdef\PDF@FinishDoc{}%
2759     }%
2760   \endinput
2761 }%
2762 }
2763 \DeclareVoidOption{pdftex}{%
2764   \ifpdf
2765     \def\Hy@driver{hpdftex}%
2766     \PassOptionsToPackage{pdftex}{color}%
2767   \else
2768     \Hy@Error{%
2769       Wrong driver option `pdftex',\MessageBreak
2770       because pdfTeX in PDF mode is not detected%
2771     }\@ehc
2772   \fi
2773 }
2774 \DeclareVoidOption{luatex}{%
2775   \ifpdf
2776     \ifx\pdfextension\@undefined
2777       \def\Hy@driver{hpdftex}%
2778       \PassOptionsToPackage{pdftex}{color}%
2779     \else
2780       \def\Hy@driver{hluatex}%
2781       \PassOptionsToPackage{luatex}{color}%
2782     \fi
2783   \else
2784     \Hy@Error{%
2785       Wrong driver option `luatex',\MessageBreak
2786       because luaTeX in PDF mode is not detected%
2787     }\@ehc
2788   \fi
2789 }
2790 \DeclareVoidOption{nativepdf}{%
2791   \HyOpt@CheckDvi{nativepdf}{%
2792     \def\Hy@driver{hdvips}%
2793     \PassOptionsToPackage{dvips}{color}%
2794   }%
2795 }
2796 \DeclareVoidOption{dviPDFm}{%
2797   \HyOpt@CheckDvi{dviPDFm}{%
2798     \def\Hy@driver{hdvipdfm}%
2799   }%
2800 }
2801 \DeclareVoidOption{dviPDFmx}{%
2802   \HyOpt@CheckDvi{dviPDFmx}{%

```

```

2803 \def\Hy@driver{hdvipdfm}%
2804 \PassOptionsToPackage{dvipdfmx}{color}%
2805 }%
2806 }
2807 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2808 \expandafter\ifx\csname if#1\expandafter\endcsname
2809 \csname iftrue\endcsname
2810 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2811 \else
2812 \chardef\SpecialDvipdfmxOutlineOpen\z@
2813 \fi
2814 }
2815 \DeclareVoidOption{xetex}{%
2816 \ifxetex
2817 \def\Hy@driver{hxdetex}%
2818 \else
2819 \Hy@Error{%
2820 Wrong driver option `xetex',\MessageBreak
2821 because XeTeX is not detected%
2822 }\@ehc
2823 \fi
2824 }
2825 \DeclareVoidOption{pdfmark}{%
2826 \HyOpt@CheckDvi{pdfmark}{%
2827 \def\Hy@driver{hdvips}%
2828 }%
2829 }
2830 \DeclareVoidOption{dvips}{%
2831 \HyOpt@CheckDvi{dvips}{%
2832 \def\Hy@driver{hdvips}%
2833 \PassOptionsToPackage{dvips}{color}%
2834 }%
2835 }
2836 \DeclareVoidOption{hypertex}{%
2837 \HyOpt@CheckDvi{hypertex}{%
2838 \def\Hy@driver{hypertex}%
2839 }%
2840 }
2841 \let\Hy@MaybeStopNow\relax
2842 \DeclareVoidOption{vtex}{%
2843 \ifvtex
2844 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2845 \def\Hy@driver{hvtex}%
2846 \else
2847 \ifnum\OpMode=10\relax
2848 \def\Hy@driver{hvtexhtm}%
2849 \def\MaybeStopEarly{%
2850 \Hy@Message{Stopped early}%
2851 \Hy@AtBeginDocument{%
2852 \PDF@FinishDoc
2853 \gdef\PDF@FinishDoc{}%
2854 }%
2855 \endinput
2856 }%

```

```

2857 \else
2858 \Hy@Error{%
2859 Wrong driver option `vtex',\MessageBreak
2860 because of wrong OpMode (\the\OpMode)%
2861 }\@ehc
2862 \fi
2863 \fi
2864 \else
2865 \Hy@Error{%
2866 Wrong driver option `vtex',\MessageBreak
2867 because VTeX is not running%
2868 }\@ehc
2869 \fi
2870 }
2871 \DeclareVoidOption{vtxpdfmark}{%
2872 \ifvtex
2873 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2874 \def\Hy@driver{hvtexmrk}%
2875 \else
2876 \Hy@Error{%
2877 Wrong driver option `vtxpdfmark',\MessageBreak
2878 because of wrong OpMode (\the\OpMode)%
2879 }\@ehc
2880 \fi
2881 \else
2882 \Hy@Error{%
2883 Wrong driver option `vtxpdfmark',\MessageBreak
2884 because VTeX is not running%
2885 }\@ehc
2886 \fi
2887 }
2888 \DeclareVoidOption{dviwindo}{%
2889 \HyOpt@CheckDvi{dviwindo}{%
2890 \def\Hy@driver{hdviwind}%
2891 \kvsetkeys{Hyp}{colorlinks}%
2892 \PassOptionsToPackage{dviwindo}{color}%
2893 }%
2894 }
2895 \DeclareVoidOption{dvipsone}{%
2896 \HyOpt@CheckDvi{dvipsone}{%
2897 \def\Hy@driver{hdvipson}%
2898 \PassOptionsToPackage{dvipsone}{color}%
2899 }%
2900 }
2901 \DeclareVoidOption{textures}{%
2902 \HyOpt@CheckDvi{textures}{%
2903 \def\Hy@driver{htexture}%
2904 }%
2905 }
2906 \DeclareVoidOption{latex2html}{%
2907 \HyOpt@CheckDvi{latex2html}{%
2908 \Hy@AtBeginDocument{\@latex2htmlX}%
2909 }%
2910 }

```

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

```

2911 \DeclareVoidOption{ps2pdf}{%
2912   \HyOpt@CheckDvi{ps2pdf}{%
2913     \def\Hy@driver{hdvips}%
2914     \PassOptionsToPackage{dvips}{color}%
2915   }%
2916 }

2917 \let\HyOpt@DriverFallback\ltx@empty
2918 \define@key{Hyp}{driverfallback}{%
2919   \ifHy@DviMode
2920     \def\HyOpt@DriverFallback{#1}%
2921     \Hy@Match\HyOpt@DriverFallback{}{%
2922       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2923       latex2html|tex4ht)$%
2924     }{}{%
2925       \Hy@Warning{%
2926         Invalid driver `#1' for option\MessageBreak
2927         `driverfallback'%
2928       }%
2929       \let\HyOpt@DriverFallback\ltx@empty
2930     }%
2931   \fi
2932 }

2933 \let\HyOpt@CustomDriver\ltx@empty
2934 \define@key{Hyp}{customdriver}{%
2935   \IfFileExists{#1.def}{%
2936     \def\HyOpt@CustomDriver{#1}%
2937   }{%
2938     \Hy@Warning{%
2939       Missing driver file `#1.def',\MessageBreak
2940       ignoring custom driver%
2941     }%
2942   }%
2943 }

```

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.

```

2944 \define@key{Hyp}{hyperfigures}[true]{%
2945   \Hy@boolkey{hyperfigures}{#1}%
2946 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2947 \define@key{Hyp}{hyperfootnotes}[true]{%
2948   \Hy@boolkey{hyperfootnotes}{#1}%
2949 }

```

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

```

2950 \def\back@none{none}
2951 \def\back@section{section}
2952 \def\back@page{page}
2953 \def\back@slide{slide}
2954 \define@key{Hyp}{backref}[section]{%

```

```

2955 \lowercase{\def\Hy@tempa{#1}}%
2956 \ifx\Hy@tempa\@empty
2957   \let\Hy@tempa\back@section
2958 \fi
2959 \ifx\Hy@tempa\Hy@false
2960   \let\Hy@tempa\back@none
2961 \fi
2962 \ifx\Hy@tempa\back@slide
2963   \let\Hy@tempa\back@section
2964 \fi
2965 \ifx\Hy@tempa\back@page
2966   \PassOptionsToPackage{hyperpageref}{backref}%
2967   \Hy@backreftrue
2968 \else
2969   \ifx\Hy@tempa\back@section
2970     \PassOptionsToPackage{hyperref}{backref}%
2971     \Hy@backreftrue
2972   \else
2973     \ifx\Hy@tempa\back@none
2974       \Hy@backreffalse
2975     \else
2976       \Hy@WarnOptionValue{#1}{backref}{%
2977         `section', `slide', `page', `none',\MessageBreak
2978         or `false'}%
2979     \fi
2980   \fi
2981 \fi
2982 }
2983 \define@key{Hyp}{pagebackref}[true]{%
2984   \edef\Hy@tempa{#1}%
2985   \lowercase\expandafter{%
2986     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2987   }%
2988   \ifx\Hy@tempa\@empty
2989     \let\Hy@tempa\Hy@true
2990   \fi
2991   \ifx\Hy@tempa\Hy@true
2992     \PassOptionsToPackage{hyperpageref}{backref}%
2993     \Hy@backreftrue
2994   \else
2995     \ifx\Hy@tempa\Hy@false
2996       \Hy@backreffalse
2997     \else
2998       \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2999     \fi
3000   \fi
3001 }

```

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

```

3002 \define@key{Hyp}{hyperindex}[true]{%
3003   \Hy@boolkey{hyperindex}{#1}%
3004 }

```

Configuration of encap char.

```

3005 \define@key{Hyp}{encap}{\|}{%
3006   \def\HyInd@EncapChar{#1}%
3007 }

```

12 Language options

The \autoref feature depends on the language.

```

3008 \def\HyLang@afrikaans{%
3009   \def\equationautorefname{Vergelyking}%
3010   \def\footnoteautorefname{Voetnota}%
3011   \def\itemautorefname{Item}%
3012   \def\figureautorefname{Figuur}%
3013   \def\tableautorefname{Tabel}%
3014   \def\partautorefname{Deel}%
3015   \def\appendixautorefname{Bylae}%
3016   \def\chapterautorefname{Hoofstuk}%
3017   \def\sectionautorefname{Afdeling}%
3018   \def\subsectionautorefname{Subafdeling}%
3019   \def\subsubsectionautorefname{Subsubafdeling}%
3020   \def\paragraphautorefname{Paragraaf}%
3021   \def\subparagraphautorefname{Subparagraaf}%
3022   \def\FancyVerbLineautorefname{Lyn}%
3023   \def\theoremautorefname{Teorema}%
3024   \def\pageautorefname{Bladsy}%
3025 }
3026 \def\HyLang@english{%
3027   \def\equationautorefname{Equation}%
3028   \def\footnoteautorefname{footnote}%
3029   \def\itemautorefname{item}%
3030   \def\figureautorefname{Figure}%
3031   \def\tableautorefname{Table}%
3032   \def\partautorefname{Part}%
3033   \def\appendixautorefname{Appendix}%
3034   \def\chapterautorefname{chapter}%
3035   \def\sectionautorefname{section}%
3036   \def\subsectionautorefname{subsection}%
3037   \def\subsubsectionautorefname{subsubsection}%
3038   \def\paragraphautorefname{paragraph}%
3039   \def\subparagraphautorefname{subparagraph}%
3040   \def\FancyVerbLineautorefname{line}%
3041   \def\theoremautorefname{Theorem}%
3042   \def\pageautorefname{page}%
3043 }
3044 \def\HyLang@french{%
3045   \def\equationautorefname{'equation}%
3046   \def\footnoteautorefname{note}%
3047   \def\itemautorefname{item}%
3048   \def\figureautorefname{figure}%
3049   \def\tableautorefname{tableau}%
3050   \def\partautorefname{partie}%
3051   \def\appendixautorefname{annexe}%
3052   \def\chapterautorefname{chapitre}%
3053   \def\sectionautorefname{section}%

```

```

3054 \def\subsectionautorefname{sous-section}%
3055 \def\subsubsectionautorefname{sous-sous-section}%
3056 \def\paragraphautorefname{paragraphe}%
3057 \def\subparagraphautorefname{sous-paragraphe}%
3058 \def\FancyVerbLineautorefname{ligne}%
3059 \def\theoremautorefname{th\`eor\`eme}%
3060 \def\pageautorefname{page}%
3061 }
3062 \def\HyLang@german{%
3063 \def\equationautorefname{Gleichung}%
3064 \def\footnoteautorefname{Fu\ss note}%
3065 \def\itemautorefname{Punkt}%
3066 \def\figureautorefname{Abbildung}%
3067 \def\tableautorefname{Tabelle}%
3068 \def\partautorefname{Teil}%
3069 \def\appendixautorefname{Anhang}%
3070 \def\chapterautorefname{Kapitel}%
3071 \def\sectionautorefname{Abschnitt}%
3072 \def\subsectionautorefname{Unterabschnitt}%
3073 \def\subsubsectionautorefname{Unterunterabschnitt}%
3074 \def\paragraphautorefname{Absatz}%
3075 \def\subparagraphautorefname{Unterabsatz}%
3076 \def\FancyVerbLineautorefname{Zeile}%
3077 \def\theoremautorefname{Theorem}%
3078 \def\pageautorefname{Seite}%
3079 }
3080 \def\HyLang@italian{%
3081 \def\equationautorefname{Equazione}%
3082 \def\footnoteautorefname{nota}%
3083 \def\itemautorefname{punto}%
3084 \def\figureautorefname{Figura}%
3085 \def\tableautorefname{Tabella}%
3086 \def\partautorefname{Parte}%
3087 \def\appendixautorefname{Appendice}%
3088 \def\chapterautorefname{Capitolo}%
3089 \def\sectionautorefname{sezione}%
3090 \def\subsectionautorefname{sottosezione}%
3091 \def\subsubsectionautorefname{sottosottosezione}%
3092 \def\paragraphautorefname{paragrafo}%
3093 \def\subparagraphautorefname{sottoparagrafo}%
3094 \def\FancyVerbLineautorefname{linea}%
3095 \def\theoremautorefname{Teorema}%
3096 \def\pageautorefname{Pag.\@}%
3097 }
3098 \def\HyLang@magyar{%
3099 \def\equationautorefname{Egyenlet}%
3100 \def\footnoteautorefname{l\`abjegyzet}%
3101 \def\itemautorefname{Elem}%
3102 \def\figureautorefname{\`Abra}%
3103 \def\tableautorefname{T\`abl\`azat}%
3104 \def\partautorefname{R\`esz}%
3105 \def\appendixautorefname{F\`uggel\`ek}%
3106 \def\chapterautorefname{fejezet}%
3107 \def\sectionautorefname{szakasz}%

```



```

3108 \def\subsectionautorefname{alszakasz}%
3109 \def\subsubsectionautorefname{alalszakasz}%
3110 \def\paragraphautorefname{bekezd'es}%
3111 \def\subparagraphautorefname{albekezd'es}%
3112 \def\FancyVerbLineautorefname{sor}%
3113 \def\theoremautorefname{T'etel}%
3114 \def\pageautorefname{oldal}%
3115 }
3116 \def\HyLang@portuges{%
3117 \def\equationautorefname{Equa\c c\~ao}%
3118 \def\footnoteautorefname{Nota de rodap'e}%
3119 \def\itemautorefname{Item}%
3120 \def\figureautorefname{Figura}%
3121 \def\tableautorefname{Tabela}%
3122 \def\partautorefname{Parte}%
3123 \def\appendixautorefname{Ap\~endice}%
3124 \def\chapterautorefname{Cap\itulo}%
3125 \def\sectionautorefname{Se\c c\~ao}%
3126 \def\subsectionautorefname{Subse\c c\~ao}%
3127 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3128 \def\paragraphautorefname{par\agrafo}%
3129 \def\subparagraphautorefname{subpar\agrafo}%
3130 \def\FancyVerbLineautorefname{linha}%
3131 \def\theoremautorefname{Teorema}%
3132 \def\pageautorefname{P\agina}%
3133 }

```

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`.

```

3134 \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`?

```

3135 \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%

```

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

```

3136 % \def\equationautorefname{%
3137 % \cyr\cyrv\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3138 % }%

```

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

```

3139 \def\footnoteautorefname{%
3140 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3141 }%

```

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}”

```
3142 % \def\footnoteautorefname{%
3143 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3144 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3145 % }%
```

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

```
3146 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3147 % \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.

```
3148 \def\itemautorefname{\cyr\cyrp.}%
3149 % \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.

```
3150 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3151 \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.

```
3152 \def\partautorefname{\cyr\cyrch.}%
3153 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3154 \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.

```
3155 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3156 % \def\appendixautorefname{%
3157 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3158 % }%
```

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.

```
3159 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3160 \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.

```
3161 \def\paragraphautorefname{\cyr\cyrp.}%
3162 \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.

```
3163 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3164 % \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.

```
3165 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3166 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
3167 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3168 % \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 ...

```
3169 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3170 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
3171 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3172 \def\pageautorefname{\cyr\cyrs.}%
```

```
3173 }
```

```
3174 \def\HyLang@spanish{%
```

```
3175 \def\equationautorefname{Ecuaci\'on}%
```

```
3176 \def\footnoteautorefname{Nota a pie de p\'agina}%
```

```
3177 \def\itemautorefname{Elemento}%
```

```
3178 \def\figureautorefname{Figura}%
```

```
3179 \def\tableautorefname{Tabla}%
```

```
3180 \def\partautorefname{Parte}%
```

```
3181 \def\appendixautorefname{Ap\'endice}%
```

```
3182 \def\chapterautorefname{Cap\'itulo}%
```

```
3183 \def\sectionautorefname{Secci\'on}%
```

```
3184 \def\subsectionautorefname{Subsecci\'on}%
```

```
3185 \def\subsubsectionautorefname{Subsubsecci\'on}%
```

```
3186 \def\paragraphautorefname{P\'arrafo}%
```

```
3187 \def\subparagraphautorefname{Subp\'arrafo}%
```

```
3188 \def\FancyVerbLineautorefname{L\'inea}%
```

```
3189 \def\theoremautorefname{Teorema}%
```

```
3190 \def\pageautorefname{P\'agina}%
```

```
3191 }
```

```
3192 \def\HyLang@catalan{%
```

```
3193 \def\equationautorefname{Equaci\'o}%
```

```
3194 \def\footnoteautorefname{Nota al peu de p\'agina}%
```

```
3195 \def\itemautorefname{Element}%
```

```
3196 \def\figureautorefname{Figura}%
```

```
3197 \def\tableautorefname{Taula}%
```

```
3198 \def\partautorefname{Part}%
```

```
3199 \def\appendixautorefname{Ap\'endix}%
```

```
3200 \def\chapterautorefname{Cap\'itol}%
```

```

3201 \def\sectionautorefname{Secci\'o}%
3202 \def\subsectionautorefname{Subsecci\'o}%
3203 \def\subsubsectionautorefname{Subsubsecci\'o}%
3204 \def\paragraphautorefname{Par\`agraf}%
3205 \def\subparagraphautorefname{Subpar\`agraf}%
3206 \def\FancyVerbLineautorefname{L\'inia}%
3207 \def\theoremautorefname{Teorema}%
3208 \def\pageautorefname{P\`agina}%
3209 }

3210 \def\HyLang@vietnamese{%
3211   \def\equationautorefname{Ph\`uhorn{}\`ohorn{}ng tr\`inh}%
3212   \def\footnoteautorefname{Ch\`u th\`ich}%
3213   \def\itemautorefname{m\`d{u}c}%
3214   \def\figureautorefname{H\`inh}%
3215   \def\tableautorefname{B\`h{a}ng}%
3216   \def\partautorefname{Ph\`acircumflex{}n}%
3217   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3218   \def\chapterautorefname{ch\`uhorn{}\`ohorn{}ng}%
3219   \def\sectionautorefname{m\`d{u}c}%
3220   \def\subsectionautorefname{m\`d{u}c}%
3221   \def\subsubsectionautorefname{m\`d{u}c}%
3222   \def\paragraphautorefname{\`dj{}o\`d{a}n}%
3223   \def\subparagraphautorefname{\`dj{}o\`d{a}n}%
3224   \def\FancyVerbLineautorefname{d\`ong}%
3225   \def\theoremautorefname{D\`J{}\`d{i}nh l\`y}%
3226   \def\pageautorefname{Trang}%
3227 }

```

Greek, see github issue 52

```

3228 \def\HyLang@greek{%
3229   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\text-
3230     tomega\textsigma\textteta}%
3231   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\text-
3232     teta\textmu\textepsilon\acconos\textiota\textomega\textsigma\textteta}%
3233   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textep-
3234     silon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3235   \def\figureautorefname{\textSigma\textchi\acconos\textteta\textmu\textal-
3236     pha}%
3237   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\text-
3238     alpha}%
3239   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
3240     sigma}%
3241   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
3242     rho\texttau\textteta\textmu\textalpha}%
3243   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
3244     pha\textlambda\textalpha\textiota\textomicron}%
3245   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
3246     teta\texttau\textalpha}%
3247   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
3248     conos\textomicron\texttau\textteta\texttau\textalpha}%
3249   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\text-
3250     rho\textalpha\textphi\textomicron\textvarsigma}%
3251   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\text-

```

```

        talpha\textrho\acctonos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
        cron\textvarsigma}%
3242 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
        ctonos\texteta}%
3243 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\text-
        rho\texteta\textmu\textalpha}%
3244 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\text-
        talpha}%
3245 }

3246 \def\HyLang@dutch{%
3247 \def\equationautorefname{Vergelijking}%
3248 \def\footnoteautorefname{voetnoot}%
3249 \def\itemautorefname{punt}%
3250 \def\figureautorefname{Figuur}%
3251 \def\tableautorefname{Tabel}%
3252 \def\partautorefname{Deel}%
3253 \def\appendixautorefname{Bijlage}%
3254 \def\chapterautorefname{hoofdstuk}%
3255 \def\sectionautorefname{paragraaf}%
3256 \def\subsectionautorefname{deelparagraaf}%
3257 \def\subsubsectionautorefname{deel-deelparagraaf}%
3258 \def\paragraphautorefname{alinea}%
3259 \def\subparagraphautorefname{deelalinea}%
3260 \def\FancyVerbLineautorefname{regel}%
3261 \def\theoremautorefname{Stelling}%
3262 \def\pageautorefname{pagina}%
3263 }

3264 \def\HyLang@norsk{%
3265 \def\equationautorefname{Ligning}%
3266 \def\footnoteautorefname{fotnote}%
3267 \def\itemautorefname{element}%
3268 \def\figureautorefname{Figur}%
3269 \def\tableautorefname{Tabell}%
3270 \def\partautorefname{Del}%
3271 \def\appendixautorefname{Tillegg}%
3272 \def\chapterautorefname{kapittel}%
3273 \def\sectionautorefname{seksjon}%
3274 \def\subsectionautorefname{underseksjon}%
3275 \def\subsubsectionautorefname{under-underseksjon}%
3276 \def\paragraphautorefname{avsnitt}%
3277 \def\subparagraphautorefname{underavsnitt}%
3278 \def\FancyVerbLineautorefname{Linje}%
3279 \def\theoremautorefname{Teorem}%
3280 \def\pageautorefname{side}%
3281 }

3282 \def\HyLang@danish{%
3283 \def\equationautorefname{Ligning}%
3284 \def\footnoteautorefname{fodnote}%
3285 \def\itemautorefname{element}%
3286 \def\figureautorefname{Figur}%
3287 \def\tableautorefname{Tabel}%
3288 \def\partautorefname{Del}%
3289 \def\appendixautorefname{Bilag}%
3290 \def\chapterautorefname{kapitel}%

```

```

3291 \def\sectionautorefname{sektion}%
3292 \def\subsectionautorefname{under-sektion}%
3293 \def\subsubsectionautorefname{under-under-sektion}%
3294 \def\paragraphautorefname{afsnit}%
3295 \def\subparagraphautorefname{underafsnit}%
3296 \def\FancyVerbLineautorefname{linje}%
3297 \def\theoremautorefname{Teorem}%
3298 \def\pageautorefname{side}%
3299 }

```

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

```

3300 \def\HyLang@addto#1#2{%
3301   #2%
3302   \@temptokena{#2}%
3303   \ifx#1\relax
3304     \let#1\@empty
3305   \fi
3306   \ifx#1\@undefined
3307     \edef#1{\the\@temptokena}%
3308   \else
3309     \toks@\expandafter{#1}%
3310     \edef#1{\the\toks@\the\@temptokena}%
3311   \fi
3312   \@temptokena{}\toks@\@temptokena
3313 }

3314 \def\HyLang@DeclareLang#1#2#3{%
3315   \@ifpackagewith{babel}{#1}{%
3316     \expandafter\HyLang@addto
3317       \csname extras#1\expandafter\endcsname
3318       \csname HyLang@#2\endcsname
3319     \begingroup
3320       \edef\x{\endgroup
3321         #3%
3322       }%
3323     \x
3324     \@namedef{HyLang@#1@done}{}%
3325   }{}%
3326   \begingroup
3327     \edef\x##1##2{%
3328       \noexpand\ifx##2\relax
3329         \errmessage{No definitions for language #2' found!}%
3330       \noexpand\fi
3331     \endgroup
3332     \noexpand\define@key{Hyp}{#1}[]{}%
3333     \noexpand\@ifundefined{HyLang@#1@done}{%
3334       \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3335       #3%
3336       \noexpand\@namedef{HyLang@#1@done}{}%
3337     }{}%
3338   }%
3339 }%
3340 \expandafter\x\csname extras#1\expandafter\endcsname
3341   \csname HyLang@#2\endcsname

```

```

3342 }
3343 \HyLang@DeclareLang{english}{english}{}
3344 \HyLang@DeclareLang{UKenglish}{english}{}
3345 \HyLang@DeclareLang{british}{english}{}
3346 \HyLang@DeclareLang{USenglish}{english}{}
3347 \HyLang@DeclareLang{american}{english}{}
3348 \HyLang@DeclareLang{german}{german}{}
3349 \HyLang@DeclareLang{austrian}{german}{}
3350 \HyLang@DeclareLang{ngerman}{german}{}
3351 \HyLang@DeclareLang{naustrian}{german}{}
3352 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3353 \HyLang@DeclareLang{brazil}{portuges}{}
3354 \HyLang@DeclareLang{brazilian}{portuges}{}
3355 \HyLang@DeclareLang{portuguese}{portuges}{}
3356 \HyLang@DeclareLang{spanish}{spanish}{}
3357 \HyLang@DeclareLang{catalan}{catalan}{}
3358 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3359 \HyLang@DeclareLang{french}{french}{}
3360 \HyLang@DeclareLang{frenchb}{french}{}
3361 \HyLang@DeclareLang{francais}{french}{}
3362 \HyLang@DeclareLang{acadian}{french}{}
3363 \HyLang@DeclareLang{canadien}{french}{}
3364 \HyLang@DeclareLang{italian}{italian}{}
3365 \HyLang@DeclareLang{magyar}{magyar}{}
3366 \HyLang@DeclareLang{hungarian}{magyar}{}
3367 \HyLang@DeclareLang{greek}{greek}{}
3368 \HyLang@DeclareLang{dutch}{dutch}{}
3369 \HyLang@DeclareLang{norsk}{norsk}{}
3370 \HyLang@DeclareLang{norwegian}{norsk}{}
3371 \HyLang@DeclareLang{danish}{danish}{}

```

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

```

3372 \DeclareVoidOption{vietnamese}{%
3373   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3374   \Hy@AtEndOfPackage{%
3375     \@ifundefined{T@PU}{}{}%
3376     \input{puvnenc.def}%
3377   }%
3378 }%
3379 }
3380 \DeclareVoidOption{vietnam}{%
3381   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3382   \Hy@AtEndOfPackage{%
3383     \@ifundefined{T@PU}{}{}%
3384     \input{puvnenc.def}%
3385   }%
3386 }%
3387 }

```

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

```

3388 \DeclareVoidOption{arabic}{%
3389   \Hy@AtEndOfPackage{%
3390     \@ifundefined{T@PU}{}{}%
3391     \input{puarenc.def}%
3392   }%

```

```

3393 }%
3394 }

```

13 Options to change appearance of links

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

```

3395 \define@key{Hyp}{colorlinks}[true]{%
3396   \Hy@boolkey{colorlinks}{#1}%
3397 }
3398 \DeclareVoidOption{hidelinks}{%
3399   \Hy@colorlinksfalse
3400   \Hy@ocgcolorlinksfalse
3401   \Hy@frenchlinksfalse
3402   \def\Hy@colorlink##1{\begingroup}%
3403   \def\Hy@endcolorlink{\endgroup}%
3404   \def\@pdfborder{0 0 0}%
3405   \let\@pdfborderstyle\ltx@empty
3406 }
3407 \define@key{Hyp}{ocgcolorlinks}[true]{%
3408   \Hy@boolkey{ocgcolorlinks}{#1}%
3409 }
3410 \Hy@AtBeginDocument{%
3411   \begingroup
3412   \@ifundefined{OBJ@OCG@view}{%
3413     \ifHy@ocgcolorlinks
3414       \Hy@Warning{%
3415         Driver does not support `ocgcolorlinks',\MessageBreak
3416         using `colorlinks' instead%
3417       }%
3418     \fi
3419   }{}%
3420   \endgroup
3421 }
3422 \define@key{Hyp}{frenchlinks}[true]{%
3423   \Hy@boolkey{frenchlinks}{#1}%
3424 }

```

14 Bookmarking

```

3425 \begingroup\expandafter\expandafter\expandafter\endgroup
3426 \expandafter\ifx\csname chapter\endcsname\relax
3427   \def\toclevel@part{0}%
3428 \else
3429   \def\toclevel@part{-1}%
3430 \fi
3431 \def\toclevel@chapter{0}
3432 \def\toclevel@section{1}
3433 \def\toclevel@subsection{2}
3434 \def\toclevel@subsubsection{3}
3435 \def\toclevel@paragraph{4}
3436 \def\toclevel@subparagraph{5}
3437 \def\toclevel@figure{0}

```



```

3438 \def\toclevel@table{0}
3439 \@ifpackageloaded{listings}{%
3440   \providecommand*\theHlstlisting{\thelstlisting}%
3441   \providecommand*\toclevel@lstlisting{0}%
3442 }{}
3443 \@ifpackageloaded{listing}{%
3444   \providecommand*\theHlisting{\thelisting}%
3445   \providecommand*\toclevel@listing{0}%
3446 }{}

3447 \define@key{Hyp}{bookmarks}[true]{%
3448   \Hy@boolkey{bookmarks}{#1}%
3449 }

3450 \define@key{Hyp}{bookmarksopen}[true]{%
3451   \Hy@boolkey{bookmarksopen}{#1}%
3452 }

```

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.

```

3453 \let\Hy@bookmarksdepth\c@tocdepth
3454 \define@key{Hyp}{bookmarksdepth}[]{%
3455   \begingroup
3456   \edef\x{#1}%
3457   \ifx\x\empty
3458     \global\let\Hy@bookmarksdepth\c@tocdepth
3459   \else
3460     \@ifundefined{toclevel@\x}{%
3461       \@onelevel@sanitize\x
3462       \edef\y{\expandafter\@car\x\@nil}%
3463       \ifcase 0\expandafter\ifx\y-1\fi
3464         \expandafter\ifnum\expandafter`\y>47 %
3465           \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3466       \Hy@Warning{Unknown document division name (\x)}%
3467     \else
3468       \setbox\z@=\hbox{%
3469         \count@=\x
3470         \xdef\Hy@bookmarksdepth{\the\count@}%
3471       }%
3472     \fi
3473   }{%
3474     \setbox\z@=\hbox{%
3475       \count@=\csname toclevel@\x\endcsname
3476       \xdef\Hy@bookmarksdepth{\the\count@}%
3477     }%
3478   }%
3479   \fi

```

```

3480 \endgroup
3481 }

```

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

```

3482 \define@key{Hyp}{bookmarksopenlevel}{%
3483   \def\@bookmarksopenlevel{#1}%
3484 }
3485 \def\@bookmarksopenlevel{\maxdimen}
3486 % `bookmarkstype' to specify which `toc' file to mimic
3487 \define@key{Hyp}{bookmarkstype}{%
3488   \def\Hy@bookmarkstype{#1}%
3489 }
3490 \def\Hy@bookmarkstype{toc}

```

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

```

3491 \define@key{Hyp}{bookmarksnumbered}[true]{%
3492   \Hy@boolkey{bookmarksnumbered}{#1}%
3493 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3494 \define@key{Hyp}{CJKbookmarks}[true]{%
3495   \Hy@boolkey{CJKbookmarks}{#1}%
3496 }
3497 \def\Hy@temp#1{%
3498   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3499 }
3500 \def\Hy@@temp#1#2#3{%
3501   \define@key{Hyp}{#2color}{%
3502     \HyColor@HyperrefColor{##1}#1%
3503   }%
3504   \def#1{#3}%
3505 }
3506 \Hy@temp{link}{red}
3507 \Hy@temp{anchor}{black}
3508 \Hy@temp{cite}{green}
3509 \Hy@temp{file}{cyan}
3510 \Hy@temp{url}{magenta}
3511 \Hy@temp{menu}{red}
3512 \Hy@temp{run}{\@filecolor}
3513 \define@key{Hyp}{pagecolor}{%
3514   \Hy@WarningPageColor
3515 }
3516 \def\Hy@WarningPageColor{%
3517   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3518   \global\let\Hy@WarningPageColor\relax
3519 }
3520 \define@key{Hyp}{allcolors}{%
3521   \HyColor@HyperrefColor{#1}\@linkcolor
3522   \HyColor@HyperrefColor{#1}\@anchorcolor
3523   \HyColor@HyperrefColor{#1}\@citecolor
3524   \HyColor@HyperrefColor{#1}\@filecolor
3525   \HyColor@HyperrefColor{#1}\@urlcolor
3526   \HyColor@HyperrefColor{#1}\@menucolor
3527   \HyColor@HyperrefColor{#1}\@runcolor

```

```

3528 }
3529 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3530 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3531 \let\@baseurl\@empty
3532 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3533 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3534 \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.

```

3535 \let\@pdfpagetransition\relax
3536 \define@key{Hyp}{pdfpagetransition}{%
3537   \def\@pdfpagetransition{#1}%
3538 }

```

`\@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.

```

3539 \let\@pdfpageduration\relax
3540 \define@key{Hyp}{pdfpageduration}{%
3541   \def\@pdfpageduration{#1}%
3542   \Hy@Match\@pdfpageduration{}{
3543     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3544   }{
3545     \Hy@Warning{%
3546       Invalid value '\@pdfpageduration'\MessageBreak
3547       of option `pdfpageduration'\MessageBreak
3548       is replaced by an empty value%
3549     }%
3550     \let\@pdfpageduration\ltx@empty
3551   }%
3552 }

```

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 option 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).

```

3553 \def\Hy@ColorList{cite,file,link,menu,run,url}
3554 \@for\Hy@temp:=\Hy@ColorList\do{%
3555   \edef\Hy@temp{%
3556     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3557       \noexpand\HyColor@HyperrefBorderColor
3558       {##1}%
3559       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname

```

```

3560      {hyperref}%
3561      {\Hy@temp bordercolor}%
3562    }%
3563  }%
3564  \Hy@temp
3565 }
3566 \define@key{Hyp}{pagebordercolor}{%
3567   \Hy@WarningPageBorderColor
3568 }
3569 \def\Hy@WarningPageBorderColor{%
3570   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3571   \global\let\Hy@WarningPageBorderColor\relax
3572 }
3573 \define@key{Hyp}{allbordercolors}{%
3574   \def\Hy@temp##1##2{%
3575     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3576   }%
3577   \Hy@temp\@citebordercolor{cite}%
3578   \Hy@temp\@filebordercolor{file}%
3579   \Hy@temp\@linkbordercolor{link}%
3580   \Hy@temp\@menubordercolor{menu}%
3581   \Hy@temp\@runbordercolor{run}%
3582   \Hy@temp\@urlbordercolor{url}%
3583 }
3584 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3585 \Hy@DefNameKey{pdfhighlight}{%
3586   \do{/I}{Invert}%
3587   \do{/N}{None}%
3588   \do{/O}{Outline}%
3589   \do{/P}{Push}%
3590 }
3591 \def\Hy@setpdfhighlight{%
3592   \ifx\@pdfhighlight\@empty
3593   \else
3594     /H\@pdfhighlight
3595   \fi
3596 }
3597 \define@key{Hyp}{pdfborder}{%
3598   \let\Hy@temp\@pdfborder
3599   \def\@pdfborder{#1}%
3600   \Hy@Match\@pdfborder{}{%
3601     ^\HyPat@NonNegativeReal/ %
3602     \HyPat@NonNegativeReal/ %
3603     \HyPat@NonNegativeReal/%
3604     ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?$$%
3605   }{}{%
3606     \Hy@Warning{%
3607       Invalid value ` \@pdfborder'\MessageBreak
3608       for option `pdfborder'.\MessageBreak
3609       Option setting is ignored%
3610     }%
3611     \let\@pdfborder\Hy@temp
3612   }%
3613 }

```

```

3614 \define@key{Hyp}{pdfborderstyle}{%
3615   \let\Hy@temp\@pdfborderstyle
3616   \def\@pdfborderstyle{#1}%
3617   \Hy@Match\@pdfborderstyle{}{%
3618     ~%
3619     ( */Type */Border%
3620     | */W +\HyPat@NonNegativeReal/%
3621     | */S */[SDBIU]%
3622     | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3623     )* *$%
3624   }{}{%
3625     \Hy@Warning{%
3626       Invalid value `\'@pdfborderstyle'\MessageBreak
3627       for option `pdfborderstyle'.\MessageBreak
3628       Option setting is ignored%
3629     }%
3630     \let\@pdfborderstyle\Hy@temp
3631   }%
3632 }
3633 \def\Hy@setpdfborder{%
3634   \ifx\@pdfborder\@empty
3635   \else
3636     /Border[\@pdfborder]%
3637   \fi
3638   \ifx\@pdfborderstyle\@empty
3639   \else
3640     /BS<<\@pdfborderstyle>>%
3641   \fi
3642 }
3643 \Hy@DefNameKey{pdfpagemode}{%
3644   \do{UseNone}{}%
3645   \do{UseOutlines}{}%
3646   \do{UseThumbs}{}%
3647   \do{FullScreen}{}%
3648   \do{UseOC}{PDF 1.5}%
3649   \do{UseAttachments}{PDF 1.6}%
3650 }
3651 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3652   \do{UseNone}{}%
3653   \do{UseOutlines}{}%
3654   \do{UseThumbs}{}%
3655   \do{FullScreen}{}%
3656   \do{UseOC}{PDF 1.5}%
3657   \do{UseAttachments}{PDF 1.6}%
3658 }
3659 \Hy@DefNameKey{pdfdirection}{%
3660   \do{L2R}{Left to right}%
3661   \do{R2L}{Right to left}%
3662 }
3663 \Hy@DefNameKey{pdfviewarea}{%
3664   \do{MediaBox}{}%
3665   \do{CropBox}{}%
3666   \do{BleedBox}{}%
3667   \do{TrimBox}{}%

```

```

3668 \do{ArtBox}{}%
3669 }
3670 \Hy@DefNameKey{pdfviewclip}{%
3671 \do{MediaBox}{}%
3672 \do{CropBox}{}%
3673 \do{BleedBox}{}%
3674 \do{TrimBox}{}%
3675 \do{ArtBox}{}%
3676 }
3677 \Hy@DefNameKey{pdfprintarea}{%
3678 \do{MediaBox}{}%
3679 \do{CropBox}{}%
3680 \do{BleedBox}{}%
3681 \do{TrimBox}{}%
3682 \do{ArtBox}{}%
3683 }
3684 \Hy@DefNameKey{pdfprintclip}{%
3685 \do{MediaBox}{}%
3686 \do{CropBox}{}%
3687 \do{BleedBox}{}%
3688 \do{TrimBox}{}%
3689 \do{ArtBox}{}%
3690 }
3691 \Hy@DefNameKey{pdfprintscaling}{%
3692 \do{AppDefault}{}%
3693 \do{None}{}%
3694 }
3695 \Hy@DefNameKey{pdfduplex}{%
3696 \do{Simplex}{}%
3697 \do{DuplexFlipShortEdge}{}%
3698 \do{DuplexFlipLongEdge}{}%
3699 }
3700 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3701 \do{true}{}%
3702 \do{false}{}%
3703 }
3704 \define@key{Hyp}{pdfprintpagerange}{%
3705 \def\@pdfprintpagerange{#1}%
3706 }
3707 \Hy@DefNameKey{pdfnumcopies}{%
3708 \do{2}{two copies}%
3709 \do{3}{three copies}%
3710 \do{4}{four copies}%
3711 \do{5}{five copies}%
3712 }
3713 \define@key{Hyp}{pdfusetitle}[true]{%
3714 \Hy@boolkey{pdfusetitle}{#1}%
3715 }
3716 \def\HyXeTeX@CheckUnicode{%
3717 \ifxetex
3718 \ifHy@unicode
3719 \else
3720 \Hy@WarningNoLine{%
3721 XeTeX driver only supports unicode.\MessageBreak

```

```

3722     Enabling option `unicode'%
3723 }%
3724 \kvsetkeys{Hyp}{unicode}%
3725 \fi
3726 \else
3727 \let\HyXeTeX@CheckUnicode\relax
3728 \fi
3729 }
3730 \def\HyPsd@PrerenderUnicode#1{%
3731 \begingroup
3732 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3733 \else
3734 \sbox0{%
3735 \let\GenericInfo\@gobbletwo
3736 \let\GenericWarning\@gobbletwo
3737 \let\GenericError\@gobblefour
3738 \PrerenderUnicode{#1}%
3739 }%
3740 \fi
3741 \endgroup
3742 }
3743 \define@key{Hyp}{pdftitle}{%
3744 \HyXeTeX@CheckUnicode
3745 \HyPsd@PrerenderUnicode{#1}%
3746 \pdfstringdef\@pdftitle{#1}%
3747 }
3748 \define@key{Hyp}{pdfauthor}{%
3749 \HyXeTeX@CheckUnicode
3750 \HyPsd@PrerenderUnicode{#1}%
3751 \pdfstringdef\@pdfauthor{#1}%
3752 }
3753 \define@key{Hyp}{pdfproducer}{%
3754 \HyXeTeX@CheckUnicode
3755 \HyPsd@PrerenderUnicode{#1}%
3756 \pdfstringdef\@pdfproducer{#1}%
3757 }
3758 \define@key{Hyp}{pdfcreator}{%
3759 \HyXeTeX@CheckUnicode
3760 \HyPsd@PrerenderUnicode{#1}%
3761 \pdfstringdef\@pdfcreator{#1}%
3762 }
3763 \define@key{Hyp}{addtopdfcreator}{%
3764 \HyXeTeX@CheckUnicode
3765 \HyPsd@PrerenderUnicode{#1}%
3766 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3767 }
3768 \define@key{Hyp}{pdfcreationdate}{%
3769 \begingroup
3770 \Hy@unicodetrue
3771 \pdfstringdef\@pdfcreationdate{#1}%
3772 \endgroup
3773 }
3774 \define@key{Hyp}{pdfmoddate}{%
3775 \begingroup

```

```

3776 \Hy@unicodetrue
3777 \pdfstringdef\@pdfmoddate{#1}%
3778 \endgroup
3779 }
3780 \define@key{Hyp}{pdfsubject}{%
3781 \HyXeTeX@CheckUnicode
3782 \HyPsd@PrerenderUnicode{#1}%
3783 \pdfstringdef\@pdfsubject{#1}%
3784 }
3785 \define@key{Hyp}{pdfkeywords}{%
3786 \HyXeTeX@CheckUnicode
3787 \HyPsd@PrerenderUnicode{#1}%
3788 \pdfstringdef\@pdfkeywords{#1}%
3789 }
3790 \define@key{Hyp}{pdftrapped}{%
3791 \lowercase{\edef\Hy@temp{#1}}%
3792 \ifx\Hy@temp\HyInfo@trapped@true
3793 \def\@pdftrapped{True}%
3794 \else
3795 \ifx\Hy@temp\HyInfo@trapped@false
3796 \def\@pdftrapped{False}%
3797 \else
3798 \ifx\Hy@temp\HyInfo@trapped@unknown
3799 \def\@pdftrapped{Unknown}%
3800 \else
3801 \ifx\Hy@temp\@empty
3802 \else
3803 \Hy@Warning{%
3804 Unsupported value `#1'\MessageBreak
3805 for option `pdftrapped'%
3806 }%
3807 \fi
3808 \def\@pdftrapped{}%
3809 \fi
3810 \fi
3811 \fi
3812 }
3813 \def\HyInfo@trapped@true{true}
3814 \def\HyInfo@trapped@false{false}
3815 \def\HyInfo@trapped@unknown{unknown}
3816 \def\HyInfo@TrappedUnsupported{%
3817 \ifx\@pdftrapped\@empty
3818 \else
3819 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3820 \gdef\HyInfo@TrappedUnsupported{}%
3821 \fi
3822 }
3823 \define@key{Hyp}{pdfinfo}{%
3824 \kvsetkeys{pdfinfo}{#1}%
3825 }
3826 \def\Hy@temp#1{%
3827 \lowercase{\Hy@temp@A{#1}}{#1}%
3828 }
3829 \def\Hy@temp@A#1#2{%

```



```

3830 \define@key{pdfinfo}{#2}{%
3831   \hypersetup{pdf#1={##1}}}%
3832 }%
3833 }
3834 \Hy@temp{Title}
3835 \Hy@temp{Author}
3836 \Hy@temp{Keywords}
3837 \Hy@temp{Subject}
3838 \Hy@temp{Creator}
3839 \Hy@temp{Producer}
3840 \Hy@temp{CreationDate}
3841 \Hy@temp{ModDate}
3842 \Hy@temp{Trapped}
3843 \newif\ifHyInfo@AddonUnsupported
3844 \kv@set@family@handler{pdfinfo}{%
3845   \HyInfo@AddonHandler{#1}{#2}%
3846 }
3847 \let\HyInfo@do\relax
3848 \def\HyInfo@AddonHandler#1#2{%
3849   \ifx\kv@value\relax
3850     \Hy@Warning{%
3851       Option `pdfinfo': ignoring key `\'kv@key' without value%
3852     }%
3853   \else
3854     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3855     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3856     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3857       \ifHyInfo@AddonUnsupported
3858         \Hy@Warning{%
3859           This driver does not support additional\MessageBreak
3860           information entries, therefore\MessageBreak
3861           `\'kv@key' is ignored%
3862         }%
3863       \else
3864         \def\HyInfo@tmp##1{%
3865           \kv@define@key{pdfinfo}{##1}{%
3866             \HyXeTeX@CheckUnicode
3867             \HyPsd@PrerenderUnicode{####1}%
3868             \pdfstringdef\HyInfo@Value{####1}%
3869             \global\expandafter
3870             \let\csname HyInfo@Value@##1\endcsname
3871               \HyInfo@Value
3872           }%
3873         }%
3874         \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3875         \global\expandafter
3876         \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3877           \csname KV@pdfinfo@\HyInfo@Key\endcsname
3878         \xdef\HyInfo@AddonList{%
3879           \HyInfo@AddonList
3880           \HyInfo@do{\HyInfo@Key}%
3881         }%
3882         \kv@parse@normalized{%
3883           \HyInfo@Key={#2}%

```

```

3884     }{%
3885         \kv@processor@default{pdfinfo}%
3886     }%
3887     \fi
3888     \else
3889         \kv@parse@normalized{%
3890             \HyInfo@Key={#2}%
3891         }{%
3892             \kv@processor@default{pdfinfo}%
3893         }%
3894     \fi
3895     \fi
3896 }
3897 \def\HyInfo@GenerateAddons{%
3898     \ifHyInfo@AddonUnsupported
3899         \def\HyInfo@Addons{}%
3900     \else
3901         \begingroup
3902             \toks@{}%
3903             \def\HyInfo@do###1{%
3904                 \EdefEscapeName\HyInfo@Key{###1}%
3905                 \edef\x{%
3906                     \toks@{%
3907                         \the\toks@
3908                         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3909                     }%
3910                 }%
3911                 \x
3912             }%
3913             \HyInfo@AddonList
3914             \edef\x{\endgroup
3915                 \def\noexpand\HyInfo@Addons{\the\toks@}%
3916             }%
3917             \x
3918         \fi
3919     }
3920     \global\let\HyInfo@AddonList\ltx@empty
3921     \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
3922     \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3923     \let\setpdfinkmargin@gobble
3924     \def\calculate@pdfview#1 #2\{\%
3925         \def\@pdfview{#1}%
3926         \ifx\#2\%
3927             \def\@pdfviewparams{-32768}%
3928         \else
3929             \def\@pdfviewparams{#2}%
3930         \fi
3931     }
3932     \begingroup\expandafter\expandafter\expandafter\endgroup
3933     \expandafter\ifx\csname numexpr\endcsname\relax
3934         \def\Hy@number#1{%
3935             \expandafter\@firstofone\expandafter{\number#1}%
3936         }%
3937     \else

```

```

3938 \def\Hy@number#1{%
3939   \the\numexpr#1\relax
3940 }%
3941 \fi
3942 \define@key{Hyp}{pdfstartpage}{%
3943   \ifx\#1\%
3944     \let\@pdfstartpage\ltx@empty
3945   \else
3946     \edef\@pdfstartpage{\Hy@number{#1}}%
3947   \fi
3948 }%
3949 \define@key{Hyp}{pdfstartview}{%
3950   \ifx\#1\%
3951     \let\@pdfstartview\ltx@empty
3952   \else
3953     \hypercalcbpdef\@pdfstartview{/#1}%
3954   \fi
3955 }
3956 \def\HyPat@NonNegativeReal/{%
3957   \ *([0-9]+\.[0-9]*| [0-9]*\.[0-9]+) *%
3958 }
3959 \define@key{Hyp}{pdfremotestartview}{%
3960   \ifx\#1\%
3961     \def\@pdfremotestartview{/Fit}%
3962   \else
3963     \hypercalcbpdef\@pdfremotestartview{#1}%
3964     \edef\@pdfremotestartview{\@pdfremotestartview}%
3965     \Hy@Match\@pdfremotestartview{%
3966       ^{XYZ(%
3967         ()| %
3968         (null|-?\HyPat@NonNegativeReal/) %
3969         (null|-?\HyPat@NonNegativeReal/) %
3970         (null|\HyPat@NonNegativeReal/) %
3971       )| % end of "XYZ"
3972       Fit(%
3973         ()| %
3974         B| %
3975         (H|V|BH|BV)(%
3976           ()| %
3977           (null|\HyPat@NonNegativeReal/) %
3978         )| %
3979         R %
3980         \HyPat@NonNegativeReal/ %
3981         \HyPat@NonNegativeReal/ %
3982         \HyPat@NonNegativeReal/ %
3983         \HyPat@NonNegativeReal/ %
3984       ) % end of "Fit"
3985     )$%
3986   }-}%
3987   \Hy@Warning{%
3988     Invalid value ``\@pdfremotestartview'\MessageBreak
3989     of `pdfremotestartview'\MessageBreak
3990     is replaced by `Fit'%
3991   }%

```

```

3992 \let\@pdfremotestartview\@empty
3993 }%
3994 \ifx\@pdfremotestartview\@empty
3995 \def\@pdfremotestartview{/Fit}%
3996 \else
3997 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3998 \fi
3999 \fi
4000 }
4001 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4002 \define@key{Hyp}{pdftoolbar}[true]{%
4003 \Hy@boolkey{pdftoolbar}{#1}%
4004 }
4005 \define@key{Hyp}{pdfmenubar}[true]{%
4006 \Hy@boolkey{pdfmenubar}{#1}%
4007 }
4008 \define@key{Hyp}{pdfwindowui}[true]{%
4009 \Hy@boolkey{pdfwindowui}{#1}%
4010 }
4011 \define@key{Hyp}{pdffitwindow}[true]{%
4012 \Hy@boolkey{pdffitwindow}{#1}%
4013 }
4014 \define@key{Hyp}{pdfcenterwindow}[true]{%
4015 \Hy@boolkey{pdfcenterwindow}{#1}%
4016 }
4017 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4018 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4019 }
4020 \define@key{Hyp}{pdfa}[true]{%
4021 \Hy@boolkey{pdfa}{#1}%
4022 }
4023 \define@key{Hyp}{pdfnewwindow}[true]{%
4024 \def\Hy@temp{#1}%
4025 \ifx\Hy@temp\@empty
4026 \Hy@pdfnewwindowsetfalse
4027 \else
4028 \Hy@pdfnewwindowsettrue
4029 \Hy@boolkey{pdfnewwindow}{#1}%
4030 \fi
4031 }
4032 \def\Hy@SetNewWindow{%
4033 \ifHy@pdfnewwindowset
4034 /NewWindow %
4035 \ifHy@pdfnewwindow true\else false\fi
4036 \fi
4037 }
4038 \Hy@DefNameKey{pdfpagelayout}{%
4039 \do{SinglePage}{}%
4040 \do{OneColumn}{}%
4041 \do{TwoColumnLeft}{}%
4042 \do{TwoColumnRight}{}%
4043 \do{TwoPageLeft}{PDF 1.5}%
4044 \do{TwoPageRight}{PDF 1.5}%
4045 }

```

```

4046 \define@key{Hyp}{pdflang}{%
4047 \edef\@pdflang{#1}%
4048 \def\Hy@temp{\relax}%
4049 \ifx\@pdflang\Hy@temp
4050 \let\@pdflang\relax
4051 \fi
4052 \ifx\@pdflang\relax
4053 \else
4054 \ifx\@pdflang\ltx@empty
4055 \else

```

Test according to ABNF of RFC 3066.

```

4056 \Hy@Match\@pdflang{icase}{%
4057 ~%
4058 [a-z]{1,8}%
4059 (-[a-z0-9]{1,8})*%
4060 $%
4061 }{%

```

Test according to ABNF of RFC 5646.

```

4062 \Hy@Match\@pdflang{icase}{%
4063 ~%
4064 (%
4065 % langtag
4066 (% language
4067 [a-z]{2,3}%
4068 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4069 |[a-z]{4}% reserved for future use
4070 |[a-z]{5,8}% registered language subtag
4071 )%
4072 (-[a-z]{4})?% script
4073 (-([a-z]{2}|[0-9]{3}))?% region
4074 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4075 (-[0-9a-wyz](-[a-z0-9]{2,8})+)?% extension
4076 (-x(-[a-z0-9]{1,8})+)?% privateuse
4077 % privateuse
4078 |x-([a-z0-9]{1,8})+%
4079 % grandfathered/irregular
4080 |en-GB-oed%
4081 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4082 mingo|navajo|pwn|tao|tay|tsu)%
4083 |sgn-(BE-FR|BE-NL|CH-DE)%
4084 % grandfathered/regular
4085 |art-lojban%
4086 |cel-gaulish%
4087 |no-(bok|nyn)%
4088 |zh-(guoyu|hakka|min|min-nan|xiang)%
4089 )%
4090 $%
4091 }{%

```

Test for unique extensions.

```

4092 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4093 \Hy@Match\@pdflang{icase}{~x-}{%
4094 % remove privateuse

```

```

4095 \edef\Hy@temp{-\@pdflang}%
4096 \Hy@Match\Hy@temp{icase}{%
4097   ~%
4098   (%
4099     (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4100   )%
4101   -x-%
4102 }{%
4103   \edef\Hy@temp{%
4104     \expandafter\strip@prefix\pdfastmatch1%
4105   }%
4106 }{%}
4107 \Hy@Match\Hy@temp{icase}{%
4108   (-[a-wyz0-9]-).*\ltx@backslashchar1%
4109 }{%
4110   \Hy@Warning{%
4111     Invalid language identifier `#1'\MessageBreak
4112     for option `pdflang', because it violates\MessageBreak
4113     well-formedness defined in RFC 4646\MessageBreak
4114     by duplicate singleton subtags%
4115   }%
4116   \let\@pdflang\relax
4117 }{%}
4118 }%
4119 }{%}

```

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

```

4120 \ifx\@pdflang\relax
4121 \else
4122 \Hy@Match\@pdflang{icase}{%
4123   ~%
4124   [a-zA-Z]{2}-%
4125   (%
4126     aa|AA|%
4127     [qQ][m-zA-Z]|%
4128     [xX][a-zA-Z]|%
4129     zz|ZZ%
4130   )%
4131   (-|%)%
4132 }{%
4133   \Hy@Warning{%
4134     Invalid language identifier `#1'\MessageBreak
4135     for option `pdflang' because of invalid country code%
4136     \MessageBreak
4137     in second subtag (RFC 3066)%
4138   }%
4139   \let\@pdflang\relax
4140 }{%}
4141 \fi
4142 }{%
4143   \Hy@Warning{%
4144     Invalid language identifier `#1'\MessageBreak
4145     for option `pdflang', because it violates\MessageBreak
4146     well-formedness defined in RFC 5646%
4147   }%

```

```

4148     \let\@pdflang\relax
4149   }%
4150 }{%
4151   \Hy@Warning{%
4152     Invalid language identifier `#1'\MessageBreak
4153     for option `pdflang' (RFC 3066)%
4154   }%
4155   \let\@pdflang\relax
4156 }%
4157 \fi
4158 \fi
4159 }
4160 \define@key{Hyp}{pdfpagelabels}[true]{%
4161   \Hy@boolkey{pdfpagelabels}{#1}%
4162 }
4163 \define@key{Hyp}{pdfescapeform}[true]{%
4164   \Hy@boolkey{pdfescapeform}{#1}%
4165 }

```

Default values:

```

4166 \def\@linkbordercolor{1 0 0}
4167 \def\@urlbordercolor{0 1 1}
4168 \def\@menubordercolor{1 0 0}
4169 \def\@filebordercolor{0 .5 .5}
4170 \def\@runbordercolor{0 .7 .7}
4171 \def\@citebordercolor{0 1 0}
4172 \def\@pdfhighlight{/I}
4173 \let\@pdftitle\ltx@empty
4174 \let\@pdfauthor\ltx@empty
4175 \let\@pdfproducer\relax
4176 \def\@pdfcreator{LaTeX with hyperref}
4177 \let\@pdfcreationdate\ltx@empty
4178 \let\@pdfmoddate\ltx@empty
4179 \let\@pdfsubject\ltx@empty
4180 \let\@pdfkeywords\ltx@empty
4181 \let\@pdftrapped\ltx@empty
4182 \let\@pdfpagescrop\ltx@empty
4183 \def\@pdfstartview{/Fit}
4184 \def\@pdfremotestartview{/Fit}
4185 \def\@pdfstartpage{1}
4186 \let\@pdfprintpagerange\ltx@empty
4187 \let\@pdflang\relax
4188 \let\PDF@SetupDoc\@empty
4189 \let\PDF@FinishDoc\@empty
4190 \let\phantomsection\@empty
4191 \let\special@paper\@empty
4192 \def\HyperDestNameFilter#1{#1}
4193 \Hy@AtBeginDocument{%
4194   \begingroup
4195     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4196     \dimen@=\x\relax
4197     \ifdim\dimen@>\z@
4198       \else
4199         \dimen@=11in\relax
4200       \Hy@WarningNoLine{%

```

```

4201     Height of page (\expandafter\string\x) %
4202     is invalid (\the\x),\MessageBreak
4203     using 11in%
4204 }%
4205 \fi
4206 \dimen@=0.99626401\dimen@
4207 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4208 \endgroup
4209 }
4210 \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.

```

4211 \let\hyper@normalise\ExecuteOptions
4212 \let\ExecuteOptions\hypersetup
4213 \Hy@RestoreCatcodes
4214 \InputIfFileExists{hyperref.cfg}{-}{-}
4215 \Hy@SetCatcodes
4216 \let\ExecuteOptions\hyper@normalise
4217 \ifx\Hy@MaybeStopNow\relax
4218 \else
4219   \Hy@stoppeearlytrue
4220   \expandafter\Hy@MaybeStopNow
4221 \fi
4222 \Hy@stoppeearlyfalse

```

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.

```

4223 \SetupKeyvalOptions{family=Hyp}
4224 \DeclareLocalOptions{%
4225   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4226 }

```

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

```

4227 \@ifpackagewith{hyperref}{tex4ht}{%
4228 }{%
4229   \@ifpackageloaded{tex4ht}{%
4230     \PassOptionsToPackage{tex4ht}{hyperref}%
4231   }{%
4232     \ltx@ifundefined{HCode}{%
4233     }{%
4234       \begingroup
4235       \def\Hy@pkg{tex4ht}%
4236       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4237         \def\Hy@param{#2#3}%
4238         \ifx\Hy@param\ltx@empty
4239           \expandafter\ltx@gobble
4240         \else
4241           \def\Hy@param{#3}%
4242           \ifx\Hy@param\Hy@pkg
4243             \PassOptionsToPackage{#2}{tex4ht}%
4244             \expandafter\expandafter\expandafter\ltx@gobble
4245           \else
4246             \expandafter\expandafter\expandafter\ltx@firstofone

```



```

4247         \fi
4248     \fi
4249     {\Hy@temp@A#4\Hy@NIL}%
4250 }%
4251 \expandafter
4252 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4253 \endgroup
4254 \PassOptionsToPackage{tex4ht}{hyperref}%
4255 }%
4256 }%
4257 }

4258 \let\ReadBookmarks\relax
4259 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4260 \def\Hy@xspace@end{}
4261 \ltx@ifundefined{xspaceaddexceptions}{%
4262   \Hy@AtBeginDocument{%
4263     \ltx@ifundefined{xspaceaddexceptions}{%
4264       }{%
4265         \def\Hy@xspace@end{%
4266           \ltx@gobble{end for xspace}%
4267         }%
4268         \xspaceaddexceptions{%
4269           \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4270         }%
4271       }%
4272     }%
4273   }{%
4274     \def\Hy@xspace@end{%
4275       \ltx@gobble{end for xspace}%
4276     }%
4277     \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4278   }

```

15.2 Option draft

```

4279 \Hy@AtBeginDocument{%
4280   \ifHy@draft
4281     \let\hyper@@anchor\@gobble
4282     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4283     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4284     \def\hyper@anchorend{\Hy@xspace@end}%
4285     \let\hyper@linkstart\@gobbletwo
4286     \def\hyper@linkend{\Hy@xspace@end}%
4287     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4288     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4289     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4290     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4291     \let\PDF@SetupDoc\@empty
4292     \let\PDF@FinishDoc\@empty
4293     \let\@fifthoffive\@secondoftwo

```

```

4294 \let\@secondoffive\@secondoftwo
4295 \let\ReadBookmarks\relax
4296 \let\WriteBookmarks\relax
4297 \Hy@WarningNoLine{Draft mode on}%
4298 \fi
4299 \Hy@DisableOption{draft}%
4300 \Hy@DisableOption{nolinks}%
4301 \Hy@DisableOption{final}%
4302 }

```

15.3 PDF/A

```

4303 \Hy@DisableOption{pdfa}
4304 \ifHy@pdfa
4305 \ifnum \Hy@pdf@majorminor@version < 104
4306 \kvsetkeys{Hyp}{pdfversion=1.4}%
4307 \fi
4308 \Hy@DisableOption{pdfversion}%
4309 \def\Hy@Acrobatmenu#1#2{%
4310 \leavevmode
4311 \begingroup
4312 \edef\x{#1}%
4313 \@onelevel@sanitize\x
4314 \ifx\x\Hy@NextPage
4315 \let\y=Y%
4316 \else
4317 \ifx\x\Hy@PrevPage
4318 \let\y=Y%
4319 \else
4320 \ifx\x\Hy@FirstPage
4321 \let\y=Y%
4322 \else
4323 \ifx\x\Hy@LastPage
4324 \let\y=Y%
4325 \else
4326 \let\y=N%
4327 \fi
4328 \fi
4329 \fi
4330 \fi
4331 \expandafter\endgroup
4332 \ifx\y Y%
4333 \else
4334 \Hy@Error{%
4335 PDF/A: Named action `#1' is not permitted%
4336 }\@ehc
4337 {#2}%
4338 \expandafter\@gobble
4339 \fi
4340 }%
4341 \def\Hy@temp#1{%
4342 \expandafter\def\csname Hy@#1\endcsname{#1}%
4343 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4344 }%
4345 \Hy@temp{NextPage}%

```

```

4346 \Hy@temp{PrevPage}%
4347 \Hy@temp{FirstPage}%
4348 \Hy@temp{LastPage}%
4349 \else
4350 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4351 \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.

change 2020-10-10: no trace of \texttilde can be found in the three languages spanish, galician and estonian so the patch has been removed as outdated.

```

4352 \def\Hy@wrapper@babel#1#2{%
4353   \begingroup
4354   \Hy@safe@activetrue
4355   \set@display@protect
4356   \edef\x{#2}%
4357   \@onelevel@sanitize\x
4358   \toks@{#1}%
4359   \edef\x{\endgroup\the\toks@{\x}}%
4360   \x
4361 }
4362 \def\Hy@WrapperDef#1{%
4363   \begingroup
4364   \escapechar=\m@ne
4365   \xdef\Hy@gtemp{%
4366     \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4367   }%
4368   \endgroup
4369   \edef#1{%
4370     \noexpand\Hy@wrapper@babel
4371     \expandafter\noexpand\Hy@gtemp
4372   }%
4373   \expandafter\def\Hy@gtemp
4374 }
4375 \ifHy@hyperfigures
4376   \Hy@Info{Hyper figures ON}%
4377 \else
4378   \Hy@Info{Hyper figures OFF}%
4379 \fi
4380 \ifHy@nesting
4381   \Hy@Info{Link nesting ON}%
4382 \else
4383   \Hy@Info{Link nesting OFF}%
4384 \fi
4385 \ifHy@hyperindex
4386   \Hy@Info{Hyper index ON}%
4387 \else
4388   \Hy@Info{Hyper index OFF}%
4389 \fi
4390 \ifHy@plainpages
4391   \Hy@Info{Plain pages ON}%

```

```

4392 \else
4393   \Hy@Info{Plain pages OFF}%
4394 \fi
4395 \ifHy@backref
4396   \Hy@Info{Backreferencing ON}%
4397 \else
4398   \Hy@Info{Backreferencing OFF}%
4399 \fi
4400 \ifHy@typexml
4401   \Hy@AtEndOfPackage{%
4402     \RequirePackage{color}%
4403     \RequirePackage{nameref}[2012/07/28]%
4404   }%
4405 \fi
4406 \Hy@DisableOption{typexml}
4407 \ifHy@implicit
4408   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4409 \else
4410   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4411   \def\MaybeStopEarly{%
4412     \Hy@Message{Stopped early}%
4413     \Hy@AtBeginDocument{%
4414       \PDF@FinishDoc
4415       \gdef\PDF@FinishDoc{}}%
4416   }%
4417   \endinput
4418 }%
4419 \Hy@AtBeginDocument{%
4420   \let\autoref\ref
4421   \let\autopageref\pageref
4422   \ifx\@pdfpagemode\@empty
4423     \gdef\@pdfpagemode{UseNone}%
4424   \fi
4425   \global\Hy@backreffalse
4426 }%
4427 \Hy@AtEndOfPackage{%
4428   \global\let\ReadBookmarks\relax
4429   \global\let\WriteBookmarks\relax
4430 }%
4431 \fi
4432 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4433 \Hy@AtEndOfPackage{%
4434   \@ifpackageloaded{tex4ht}{%
4435     \def\Hy@driver{htex4ht}%
4436     \Hy@texhttrue
4437   }{}%

```

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.

```

4438   \ifx\Hy@driver\@empty
4439     \else
4440       \ifx\pdfextension\@undefined

```

```

4441 \def\Hy@temp{hpdfTeX}%
4442 \else
4443 \def\Hy@temp{hluatex}%
4444 \fi
4445 \ifpdf
4446 \ifx\Hy@driver\Hy@temp
4447 \else
4448 \Hy@WarningNoLine{%
4449   Wrong driver ``\Hy@driver.def';\MessageBreak
4450   pdfTeX is running in PDF mode.\MessageBreak
4451   Forcing driver ``\Hy@temp.def'%
4452 }%
4453 \let\Hy@driver\Hy@temp
4454 \fi
4455 \else
4456 \ifx\Hy@driver\Hy@temp
4457 \Hy@WarningNoLine{%
4458   Wrong driver ``\Hy@driver.def';\MessageBreak
4459   pdfTeX is not running in PDF mode.\MessageBreak
4460   Using default driver%
4461 }%
4462 \let\Hy@driver\@empty
4463 \fi
4464 \fi
4465 \fi
4466 \ifHy@texht
4467 \else
4468 \ifx\Hy@driver\@empty
4469 \else
4470 \def\Hy@temp{hXeTeX}%
4471 \ifXeTeX
4472 \ifx\Hy@driver\Hy@temp
4473 \else
4474 \Hy@WarningNoLine{%
4475   Wrong driver ``\Hy@driver.def';\MessageBreak
4476   XeTeX is running.\MessageBreak
4477   Forcing driver ``\Hy@temp.def' for XeTeX%
4478 }%
4479 \let\Hy@driver\Hy@temp
4480 \fi
4481 \fi
4482 \fi
4483 \fi
4484 \ifx\Hy@driver\@empty
4485 \else
4486 \def\Hy@temp{hVTeX}%
4487 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4488 \ifx\Hy@driver\Hy@temp
4489 \else
4490 \Hy@WarningNoLine{%
4491   Wrong driver ``\Hy@driver.def';\MessageBreak
4492   VTeX is running in HTML mode.\MessageBreak
4493   Forcing driver ``\Hy@temp.def'%
4494 }%

```

```

4495     \let\Hy@driver\Hy@temp
4496     \fi
4497   \else
4498     \ifx\Hy@driver\Hy@temp
4499       \Hy@WarningNoLine{%
4500         Wrong driver `\'Hy@driver.def';\MessageBreak
4501         VTeX is not running in HTML mode.\MessageBreak
4502         Using default driver%
4503       }%
4504     \let\Hy@driver\@empty
4505     \fi
4506   \fi
4507 \fi

```

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

```

4508 \let\HyOpt@DriverType\ltx@empty
4509 \ifx\HyOpt@CustomDriver\ltx@empty
4510   \ifx\Hy@driver\@empty
4511     \def\HyOpt@DriverType{ (autodetected)}%
4512     \providecommand*{\Hy@defaultdriver}{hdvips}%
4513     \ifpdf
4514       \ifx\pdfextension\@undefined
4515         \def\Hy@driver{hpdfTeX}%
4516       \else
4517         \def\Hy@driver{hluatex}%
4518       \fi
4519     \else
4520       \ifxetex
4521         \def\Hy@driver{hxetex}%
4522       \else
4523         \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4524           \def\Hy@driver{hvtexhtm}%
4525           \def\MaybeStopEarly{%
4526             \Hy@Message{Stopped early}%
4527             \Hy@AtBeginDocument{%
4528               \PDF@FinishDoc
4529               \gdef\PDF@FinishDoc{}}%
4530           }%
4531           \endinput
4532         }%
4533       \else
4534         \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4535           \def\Hy@driver{hvtex}%
4536         \else
4537           \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4538           \def\Hy@driver{hvtex}%
4539         \else
4540           \ifx\HyOpt@DriverFallback\ltx@empty
4541             \let\Hy@driver\Hy@defaultdriver
4542           \def\HyOpt@DriverType{ (default)}%
4543         \else
4544           \begingroup
4545             \toks@{\expandafter{\HyOpt@DriverFallback}%
4546             \edef\x{\endgroup
4547               \noexpand\kvsetkeys{Hyp}{\the\toks@}%

```

```

4548         }%
4549     \x
4550     \ifx\Hy@driver\ltx@empty
4551         \let\Hy@driver\Hy@defaultdriver
4552         \def\HyOpt@DriverType{ (default)}%
4553     \else
4554         \def\HyOpt@DriverType{ (fallback)}%
4555     \fi
4556 \fi
4557 \fi
4558 \fi
4559 \fi
4560 \fi
4561 \fi
4562 \ifx\Hy@driver\Hy@defaultdriver
4563     \def\Hy@temp{hdvwind}%
4564     \ifx\Hy@temp\Hy@driver
4565         \kvsetkeys{Hyp}{colorlinks}%
4566         \PassOptionsToPackage{dviwindo}{color}%
4567     \fi
4568 \fi
4569 \fi
4570 \else
4571     \def\HyOpt@DriverType{ (custom)}%
4572     \let\Hy@driver\HyOpt@CustomDriver
4573 \fi
4574 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4575 \chardef\Hy@VersionChecked=0 %
4576 \input{\Hy@driver.def}%
4577 \ifcase\Hy@VersionChecked
4578     \Hy@VersionCheck{\Hy@driver.def}%
4579 \fi
4580 \let\@unprocessedoptions\relax
4581 \Hy@RestoreCatcodes
4582 \Hy@DisableOption{tex4ht}%
4583 \Hy@DisableOption{pdftex}%
4584 \Hy@DisableOption{nativepdf}%
4585 \Hy@DisableOption{dvipdfm}%
4586 \Hy@DisableOption{dvipdfmx}%
4587 \Hy@DisableOption{dvipdfmx-outline-open}%
4588 \Hy@DisableOption{pdfmark}%
4589 \Hy@DisableOption{dvips}%
4590 \Hy@DisableOption{hypertex}%
4591 \Hy@DisableOption{vtex}%
4592 \Hy@DisableOption{vtexpdfmark}%
4593 \Hy@DisableOption{dviwindo}%
4594 \Hy@DisableOption{dvipsone}%
4595 \Hy@DisableOption{textures}%
4596 \Hy@DisableOption{latex2html}%
4597 \Hy@DisableOption{ps2pdf}%
4598 \Hy@DisableOption{xetex}%
4599 \Hy@DisableOption{driverfallback}%
4600 \Hy@DisableOption{customdriver}%
4601 \Hy@DisableOption{pdfversion}%

```

```
4602 }
```

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.

```
4603 \newif\ifHy@DvipdfmxOutlineOpen
4604 \ifxetex
4605   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4606   \else
4607     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4608     \Hy@DvipdfmxOutlineOpenttrue
4609   \fi
4610 \fi
4611 \begingroup\expandafter\expandafter\expandafter\endgroup
4612 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4613 \else
4614   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4615     \Hy@DvipdfmxOutlineOpenttrue
4616   \fi
4617 \fi
```

15.4.2 Bookmarks

```
4618 \def\WriteBookmarks{0}
4619 \def\@bookmarkopenstatus#1{%
4620   \ifHy@bookmarksopen
```

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

```
4621   \ifnum#1<\expandafter\@firstofone\expandafter
4622     {\number\@bookmarksopenlevel} % explicit space
4623   \else
4624     -%
4625   \fi
4626 \else
4627   -%
4628 \fi
4629 }
4630 \ifHy@bookmarks
4631   \Hy@Info{Bookmarks ON}%
4632   \ifx\@pdfpagemode\@empty
4633     \def\@pdfpagemode{UseOutlines}%
4634   \fi
4635 \else
4636   \let\@bookmarkopenstatus\ltx@gobble
4637   \Hy@Info{Bookmarks OFF}%
4638   \Hy@AtEndOfPackage{%
4639     \global\let\ReadBookmarks\relax
4640     \global\let\WriteBookmarks\relax
4641   }%
4642   \ifx\@pdfpagemode\@empty
4643     \def\@pdfpagemode{UseNone}%
4644   \fi
4645 \fi
4646 \Hy@DisableOption{bookmarks}
```

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


```

4647 \def\Hy@CatcodeWrapper#1{%
4648   \let\Hy@endWrap\ltx@empty
4649   \def\TMP@EnsureCode##1##2{%
4650     \edef\Hy@endWrap{%
4651       \Hy@endWrap
4652       \catcode##1 \the\catcode##1\relax
4653     }%
4654     \catcode##1 ##2\relax
4655   }%
4656   \TMP@EnsureCode{10}{12}% ^^J
4657   \TMP@EnsureCode{33}{12}% !
4658   \TMP@EnsureCode{34}{12}% "
4659   \TMP@EnsureCode{36}{3}% $ (math)
4660   \TMP@EnsureCode{38}{4}% & (alignment)
4661   \TMP@EnsureCode{39}{12}% '
4662   \TMP@EnsureCode{40}{12}% (
4663   \TMP@EnsureCode{41}{12}% )
4664   \TMP@EnsureCode{42}{12}% *
4665   \TMP@EnsureCode{43}{12}% +
4666   \TMP@EnsureCode{44}{12}% ,
4667   \TMP@EnsureCode{45}{12}% -
4668   \TMP@EnsureCode{46}{12}% .
4669   \TMP@EnsureCode{47}{12}% /
4670   \TMP@EnsureCode{58}{12}% :
4671   \TMP@EnsureCode{59}{12}% ;
4672   \TMP@EnsureCode{60}{12}% <
4673   \TMP@EnsureCode{61}{12}% =
4674   \TMP@EnsureCode{62}{12}% >
4675   \TMP@EnsureCode{63}{12}% ?
4676   \TMP@EnsureCode{91}{12}% [
4677   \TMP@EnsureCode{93}{12}% ]
4678   \TMP@EnsureCode{94}{7}% ^ (superscript)
4679   \TMP@EnsureCode{95}{8}% _ (subscript)
4680   \TMP@EnsureCode{96}{12}% `
4681   \TMP@EnsureCode{124}{12}% |
4682   \TMP@EnsureCode{126}{13}% ~ (active)
4683   ##1\relax
4684   \Hy@endWrap
4685 }

```

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

```

4686 \Hy@AtBeginDocument{%
4687   \ifHy@ocgcolorlinks
4688     \kvsetkeys{Hyp}{colorlinks}%
4689     \ifHy@pdfa
4690       \Hy@Warning{%
4691         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4692         using `colorlinks' instead of `ocgcolorlinks'%
4693       }%
4694       \Hy@ocgcolorlinksfalse
4695     \fi
4696   \fi
4697   \ifHy@ocgcolorlinks
4698     \else

```

```

4699 \Hy@DisableOption{ocgcolorlinks}%
4700 \fi
4701 \ifHy@colorlinks
4702 \def\@pdfborder{0 0 0}%
4703 \let\@pdfborderstyle\@empty
4704 \ifHy@typexml
4705 \else
4706 \Hy@CatcodeWrapper{%
4707 \RequirePackage{color}%
4708 }%
4709 \fi
4710 \def\Hy@colorlink#1{%
4711 \begingroup
4712 \HyColor@UseColor#1%
4713 }%
4714 \def\Hy@endcolorlink{\endgroup}%
4715 \Hy@Info{Link coloring ON}%
4716 \else
4717 \ifHy@frenchlinks
4718 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4719 \def\Hy@endcolorlink{\endgroup}%
4720 \Hy@Info{French linking ON}%
4721 \else
for grouping consistency:
4722 \def\Hy@colorlink#1{\begingroup}%
4723 \def\Hy@endcolorlink{\endgroup}%
4724 \Hy@Info{Link coloring OFF}%
4725 \fi
4726 \fi
4727 \Hy@DisableOption{colorlinks}%
4728 \Hy@DisableOption{frenchlinks}%
4729 \ifHy@texht
4730 \long\def\@firstoffive#1#2#3#4#5{#1}%
4731 \long\def\@secondoffive#1#2#3#4#5{#2}%
4732 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4733 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4734 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4735 \providecommand*\@safe@activetrue{}%
4736 \providecommand*\@safe@activesfalse{}%
4737 \def\T@ref#1{%
4738 \Hy@safe@activetrue
4739 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4740 \Hy@safe@activesfalse
4741 }%
4742 \def\T@pageref#1{%
4743 \Hy@safe@activetrue
4744 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4745 \Hy@safe@activesfalse
4746 }%
4747 \else
4748 \ifHy@typexml
4749 \else
4750 \Hy@CatcodeWrapper{%
4751 \RequirePackage{nameref}[2012/07/28]%

```

```

4752 }%
4753 \fi
4754 \fi
4755 \DeclareRobustCommand\ref{%
4756 \@ifstar\@refstar\T@ref
4757 }%
4758 \DeclareRobustCommand\pageref{%
4759 \@ifstar\@pagerefstar\T@pageref
4760 }%
4761 % \ifclassloaded{memoir}-{%
4762 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4763 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4764 % }%
4765 % }\ltx@secondoftwo
4766 % {%
4767 % \DeclareRobustCommand*{\nameref}{%
4768 % \@ifstar\@mem@titlerefno link\@mem@titleref
4769 % }%
4770 % }{%
4771 \DeclareRobustCommand*{\nameref}{%
4772 \@ifstar\@namerefstar\T@nameref
4773 }%
4774 % }%
4775 \ifHy@implicit
4776 \else
4777 \let \@pagerefstar\T@pageref
4778 \let \@refstar\T@ref
4779 \let \@namerefstar\T@nameref
4780 \fi
4781 }
4782 \Hy@AtBeginDocument{%
4783 \ifHy@texht
4784 \else
4785 \Hy@CatcodeWrapper\ReadBookmarks
4786 \fi
4787 }
4788 \ifHy@backref
4789 \RequirePackage{backref}%
4790 \else
4791 \let\Hy@backout\@gobble
4792 \fi
4793 \Hy@DisableOption{backref}
4794 \Hy@DisableOption{pagebackref}
4795 \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.

```
4796 \begingroup
4797 \endlinechar=-1 %
4798 \catcode`\^^A=14 %
4799 \catcode`\^^M\active
4800 \catcode`\%\active
4801 \catcode`\#\active
4802 \catcode`\_\active
4803 \catcode`\$\active
4804 \catcode`\&\active
4805 \gdef\hyper@normalise{^^A
4806   \begingroup
4807   \catcode`\^^M\active
4808   \def^^M{ }^^A
4809   \catcode`\%\active
4810   \let%\@percentchar
4811   \let%\@percentchar
4812   \catcode`\#\active
4813   \def#{\hyper@hash}^^A
4814   \def\#{\hyper@hash}^^A
4815   \@makeother\&^^A
4816   \edef&{\string&}^^A
4817   \edef\&{\string&}^^A
4818   \edef\textunderscore{\string_}^^A
4819   \let_\textunderscore
4820   \catcode`\_\active
4821   \let_\textunderscore
4822   \let~\hyper@tilde
4823   \let~\hyper@tilde
4824   \let\textasciitilde\hyper@tilde
4825   \let\\\@backslashchar
4826   \edef$\string$}^^A
4827   \Hy@safe@activestrue
4828   \hyper@n@rmalise
4829 }^^A
4830 \catcode`\#=6 ^^A
4831 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4832 \gdef\hyper@n@rmalise#1#2{^^A
4833   \def\Hy@tempa{#2}^^A
4834   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4835     \ltx@ReturnAfterElseFi{^^A
4836       \hyper@@normalise{#1}^^A
4837     }^^A
4838   \else
4839     \ltx@ReturnAfterFi{^^A
4840       \hyper@@normalise{#1}{#2}^^A
4841     }^^A
4842   \fi
4843 }^^A
4844 \gdef\hyper@@normalise#1#2{^^A
4845   \edef\Hy@tempa{^^A
4846     \endgroup
4847     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
4848   }^^A
```

```

4849 \Hy@tempa
4850 }^^A
4851 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4852   #1^^A
4853   \ifx\limits#2\limits
4854   \else
4855     \ltx@ReturnAfterFi{^^A
4856     \Hy@RemovePercentCr #2\@nil
4857   }^^A
4858   \fi
4859 }^^A
4860 \endgroup
4861 \providecommand*\hyper@chars{%
4862   \let\#\hyper@hash
4863   \let\%\@percentchar
4864   \Hy@safe@activestrue
4865 }

4866 \def\hyperlink#1#2{%
4867   \hyper@@link#{#1}{#2}%
4868 }

4869 \def\Hy@VerboseLinkStart#1#2{%
4870   \ifHy@verbose
4871     \begingroup
4872     \Hy@safe@activestrue
4873     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4874     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4875     \xdef\Hy@VerboseGlobalTemp{%
4876       \Hy@VerboseGlobalTemp, %
4877       line \the\inputlineno
4878     }%
4879     \endgroup
4880     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4881     \@onelevel@sanitize\Hy@VerboseLinkInfo
4882     \fi
4883 }

4884 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4885 \def\Hy@VerboseLinkStop{%
4886   \ifHy@verbose
4887     \begingroup
4888     \edef\x{\endgroup
4889       \write\m@ne{%
4890         Package `hyperref' Info: %
4891         End of reference \Hy@VerboseLinkInfo.%
4892       }%
4893     }%
4894     \x
4895     \fi
4896 }

4897 \def\Hy@VerboseAnchor#1{%
4898   \ifHy@verbose
4899     \begingroup
4900     \Hy@safe@activestrue
4901     \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%

```

```

4902 \endgroup
4903 \fi
4904 }

4905 \def\Hy@AllowHyphens{%
4906 \relax
4907 \ifhmode
4908 \penalty\@M
4909 \hskip\z@skip
4910 \fi
4911 }

4912 \DeclareRobustCommand*\href}[1][]{%
4913 \begingroup
4914 \setkeys{href}{#1}%
4915 \@ifnextchar\bggroup\Hy@href{\hyper@normalise\href@}%
4916 }
4917 \def\Hy@href#{%
4918 \hyper@normalise\href@
4919 }
4920 \begingroup
4921 \catcode`\$=6 %
4922 \catcode`\#=12 %
4923 \gdef\href$1{\expandafter\href@split$1##\}%
4924 \gdef\href@split$1#\$2#\$3\\$4{%
4925 \hyper@@link{$1}{$2}{$3}{$4}%
4926 \endgroup
4927 }%
4928 \endgroup

```

Option ‘page’.

```

4929 \define@key{href}{page}{%
4930 \def\Hy@href@page{#1}%
4931 }
4932 \let\Hy@href@page\@empty
4933 \newcount\c@Hy@tempcnt
4934 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4935 \def\Hy@MakeRemoteAction{%
4936 \ifx\Hy@href@page\@empty
4937 \def\Hy@href@page{0}%
4938 \else
4939 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4940 \ifnum\c@Hy@tempcnt<\@ne
4941 \Hy@Warning{%
4942 Invalid page number (\theHy@tempcnt)\MessageBreak
4943 for remote PDF file.\MessageBreak
4944 Using page 1%
4945 }%
4946 \def\Hy@href@page{0}%
4947 \else
4948 \global\advance\c@Hy@tempcnt\m@ne
4949 \edef\Hy@href@page{\theHy@tempcnt}%
4950 \fi
4951 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR

reclaims that it closes the current file with discarding the next actions.

```

4952 \ifx\Hy@href@nextactionraw\@empty
4953 \else
4954 \Hy@pdfnewwindowsettrue
4955 \Hy@pdfnewwindowtrue
4956 \fi
4957 }

```

Option ‘pdfremotestartview’.

```

4958 \define@key{href}{pdfremotestartview}{%
4959 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4960 }

```

Option ‘pdfnewwindow’.

```

4961 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4962 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4963 \newif\ifHy@href@ismap
4964 \define@key{href}{ismap}[true]{%
4965 \ltx@ifundefined{Hy@href@ismap#1}{%
4966 \Hy@Error{%
4967 Invalid value (#1) for key `ismap'.\MessageBreak
4968 Permitted values are `true' or `false'.\MessageBreak
4969 Ignoring `ismap'%
4970 }\@ehc
4971 }{%
4972 \csname Hy@href@ismap#1\endcsname
4973 }%
4974 }

```

Option ‘nextactionraw’.

```

4975 \let\Hy@href@nextactionraw\@empty
4976 \define@key{href}{nextactionraw}{%
4977 \edef\Hy@href@nextactionraw{#1}%
4978 \ifx\Hy@href@nextactionraw\@empty
4979 \else
4980 \Hy@Match\Hy@href@nextactionraw{%
4981 ~(\HyPat@ObjRef/|<<.*[/|.+>>|
4982 \[( ?\HyPat@ObjRef/|<<.*[/|.+>>)+ ?])$%
4983 }{%
4984 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4985 \Hy@href@nextactionraw\MessageBreak
4986 The action is discarded%
4987 }%
4988 }%
4989 \ifx\Hy@href@nextactionraw\@empty
4990 \else
4991 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4992 \fi
4993 \fi
4994 }
4995 \def\HyPat@ObjRef/{.+}

```

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

```

4996 \RequirePackage{url}

```

```

4997 \let\HyOrg@url\url
4998 \def\Hurl{\begingroup \Url}
4999 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5000 \def\nolinkurl@#1{\Hurl{#1}}
5001 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5002 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5003 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5004 \providecommand\hyper@image[2]{#2}

5005 \def\hypertarget#1#2{%
5006   \ifHy@nesting
5007     \hyper@@anchor{#1}{#2}%
5008   \else
5009     \hyper@@anchor{#1}{\relax}#2%
5010   \fi
5011 }

```

`\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.

```

5012 \DeclareRobustCommand*\hyperref{\%
5013   \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5014 }
5015 \def\Hy@babelnormalise#1[#2]{%
5016   \begingroup
5017     \Hy@safe@activetrue
5018     \edef\Hy@tempa{%
5019       \endgroup
5020       \noexpand#1[#2]}%
5021   }%
5022   \Hy@tempa
5023 }
5024 \def\@hyperref{\hyper@normalise\@hyperref}
5025 \def\@hyperref#1#2#3{%
5026   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
5027   \expandafter\tryhyper@link\ref@one\{#1}%
5028 }
5029 \def\tryhyper@link#1\\#2{%
5030   \hyper@@link{#2}{#1}%
5031 }

5032 \def\hyperdef{\ifnextchar{\label@hyperdef}\@hyperdef}
5033 \def\@hyperdef#1#2#3{% category, name, text
5034   \ifx\\#1\\%
5035     \def\Hy@AnchorName{#2}%
5036   \else
5037     \def\Hy@AnchorName{#1.#2}%
5038   \fi
5039   \ifHy@nesting
5040     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5041   \else

```



```

5042 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5043 \fi
5044 }

```

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

```

5045 \let\hyperrefundefinedlink\@firstofone
5046 \def\label@hyperref[#1]{%
5047 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5048 }%
5049 \def\label@@hyperref#1#2#3{%
5050 \ifx#1\relax
5051 \protect\G@refundefinedtrue
5052 \@latex@warning{%
5053 Hyper reference `#2' on page \thepage \space undefined%
5054 }%
5055 \begingroup
5056 \hyperrefundefinedlink{#3}%
5057 \endgroup
5058 \else
5059 \hyper@@link{\expandafter\@fifthoffive#1}%
5060 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5061 \fi
5062 }
5063 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5064 % anchor text
5065 \@bsphack
5066 \ifx\#2\%
5067 \def\Hy@AnchorName{#3}%
5068 \else
5069 \def\Hy@AnchorName{#2.#3}%
5070 \fi
5071 \if@filesw
5072 \protected@write\@auxout{}{%
5073 \string\newlabel{#1}{\{\}\{\}\{\Hy@AnchorName\}\}}%
5074 }%
5075 \fi
5076 \@esphack
5077 \ifHy@nesting
5078 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5079 \else
5080 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5081 \fi
5082 }

```

16.1 Link box support for XeTeX

```

5083 \newdimen\XeTeXLinkMargin
5084 \setlength{\XeTeXLinkMargin}{2pt}
5085 \ifxetex
5086 \font\XeTeXLink@font=pzdr at 1sp\relax
5087 \newcommand*\XeTeXLink@space{%
5088 \begingroup

```

```

5089 \XeTeXLink@font
5090 \@xxxii
5091 \endgroup
5092 }%
5093 \newcommand{\XeTeXLinkBox}[1]{%
5094 \begingroup
5095 \leavevmode
5096 \sbox\z@{#1}%
5097 \begingroup
5098 \dimen@=\dp\z@
5099 \advance\dimen@\XeTeXLinkMargin
5100 \setbox\tw@=\llap{%
5101 \hb@xt@\XeTeXLinkMargin{%
5102 \lower\dimen@\hbox{\XeTeXLink@space}%
5103 \hss
5104 }%
5105 }%
5106 \dp\tw@=\dp\z@
5107 \ht\tw@=\ht\z@
5108 \copy\tw@
5109 \endgroup
5110 \copy\z@
5111 \dimen@=\ht\z@
5112 \advance\dimen@\XeTeXLinkMargin
5113 \setbox\tw@=\rlap{%
5114 \hb@xt@\XeTeXLinkMargin{%
5115 \hss
5116 \raise\dimen@\hbox{\XeTeXLink@space}%
5117 }%
5118 }%
5119 \dp\tw@=\dp\z@
5120 \ht\tw@=\ht\z@
5121 \copy\tw@
5122 \endgroup
5123 }%
5124 \else
5125 \newcommand*{\XeTeXLinkBox}[1]{%
5126 \begingroup
5127 \leavevmode
5128 \sbox\z@{#1}%
5129 \copy\z@
5130 \endgroup
5131 }%
5132 \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.

```

5133 \def\hyper@@link{\let\Hy@reserved@a\relax
5134 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5135 }

```

```

5136 % #1: type
5137 % #2: URL
5138 % #3: destination name
5139 % #4: text
5140 \def\hyper@link@[#1]#2#3#4{%
5141   \ltx@ifempty{#4}{% link text
5142     \Hy@Warning{Suppressing empty link}%
5143   }{%
5144     \begingroup
5145       \protected@edef\Hy@tempa{#2}%
5146       \edef\Hy@tempb{#3}%
5147       \ifx\Hy@tempa\ltx@empty
5148         \ifx\Hy@tempb\ltx@empty
5149           \Hy@Warning{Suppressing link with empty target}%
5150           \toks@{%
5151             \endgroup
5152             \ltx@secondoftwo
5153           }%
5154         \else
5155           \toks@{%
5156             \endgroup
5157             \hyper@link{#1}%
5158           }%
5159         \fi
5160       \else
5161         \toks@{%
5162           \endgroup
5163           \expandafter\hyper@readexternallink#2\\{#1}%
5164         }%
5165       \fi
5166       \Hy@safe@activesfalse
5167       \toks@\expandafter{%
5168         \the\expandafter\toks@
5169         \expandafter{\Hy@tempb}{#4}%
5170       }%
5171       \the\toks@
5172     }%
5173 }

```

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.

```

5174 \def\hyper@readexternallink#1\\#2#3#4{%
5175   \begingroup
5176   \let\\\relax
5177   \expandafter\endgroup
5178   \expandafter\@hyper@@readexternallink#1\\{#2}{#3}{#4}%
5179 }
5180 \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.

```
5181 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5182 }
```

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

```
5183 \def\@pdftempwordfile{file}%
5184 \def\@pdftempwordrun{run}%
5185 \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:

```
5186 \ifx\\\#6\\\%
5187 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5188 \else
5189 \ifx\\\#4\\\%
5190 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5191 \else
```

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

```
5192 \def\@pdftempa{#4}%
5193 \ifx\@pdftempa\@pdftempwordfile
5194 \@hyper@linkfile#7\\\{#3}{#2}{#7}%
5195 \else
```

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

```
5196 \ifx\@pdftempa\@pdftempwordrun
5197 \ifHy@pdfa
5198 \Hy@Error{%
5199 PDF/A: Launch action is prohibited%
5200 }\@ehc
5201 \begingroup
5202 \leavevmode
5203 #2%
5204 \endgroup
5205 \else
5206 \@hyper@launch#7\\\{#3}{#2}%
5207 \fi
5208 \else
```

otherwise its a URL

```
5209 \@hyper@linkurl{#3}{#7\ifx\\\#2\\\else\hyper@hash#2\fi}%
5210 \fi
5211 \fi
5212 \fi
5213 \fi
5214 }
```

By default, turn run: into file:

```

5215 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text, linkname
5216 \hyper@linkurl{#2}{%
5217 \Hy@linkfileprefix
5218 #1%
5219 \ifx\|#3\|%
5220 \else
5221 \hyper@hash
5222 #3%
5223 \fi
5224 }%
5225 }

```

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

```

5226 \def\@hyper@linkfile file:#1\|#2#3#4{%
5227 %file url,link string, name, original uri
5228 \filename@parse{#1}%
5229 \ifx\filename@ext\relax
5230 \edef\filename@ext{\XR@ext}%
5231 \fi
5232 \def\use@file{\filename@area\filename@base.\filename@ext}%
5233 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5234 \hyper@linkfile{#2}{\use@file}{#3}%
5235 }{%
5236 \ifx\@baseurl\@empty
5237 \hyper@linkurl{#2}{%
5238 #4\ifx\|#3\|\else\hyper@hash#3\fi
5239 }%
5240 \else
5241 \hyper@linkurl{#2}{\use@file\ifx\|#3\|\else\hyper@hash#3\fi}%
5242 \fi
5243 }%
5244 }

5245 \def\Hy@IfStringEndsWith#1#2{%
5246 \begingroup
5247 \edef\x{#1}%
5248 \@onelevel@sanitize\x
5249 \edef\x{.\x}%
5250 \edef\y{#2}%
5251 \@onelevel@sanitize\y
5252 \edef\y{.\y}%
5253 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5254 \endgroup
5255 \ifx\relax##2\relax
5256 \expandafter\ltx@secondoftwo
5257 \else
5258 \expandafter\ltx@firstoftwo
5259 \fi
5260 }%
5261 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5262 }

5263 \def\Hy@StringLocalhost{localhost}

```

```

5264 \@onelevel@sanitize\Hy@StringLocalhost
5265 \def\Hy@CleanupFile#1{%
5266   \edef#1{#1}%
5267   \expandafter\Hy@@CleanupFile#1\hbox{///\hbox\@nil{#1}}%
5268 }
5269 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5270   \begingroup
5271     \toks@{\endgroup}%
5272     \def\x{#1}%
5273     \ifx\x\@empty
5274       \def\x{#2}%
5275     \ifx\x\@empty
5276       \toks@{\endgroup\def#5{/#3}}%
5277     \else
5278       \@onelevel@sanitize\x
5279       \ifx\x\Hy@StringLocalhost
5280         \toks@{\endgroup\def#5{/#3}}%
5281       \fi
5282     \fi
5283   \fi
5284   \the\toks@
5285 }

```

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.

```

5286 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5287 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5288   \ifx\#1\%
5289     #2\Hy@Warning{Ignoring empty anchor}%
5290   \else
5291     \def\anchor@spot{#2#3}%
5292     \let\put@me@back\@empty
5293     \ifx\relax#2\relax
5294     \else
5295       \ifHy@nesting
5296       \else
5297         \ifcat a\relax#2\relax
5298         \else
5299           \ifcat 0\relax#2 \relax
5300         \else
5301           % \typeout{Anchor start is not alphanumeric %
5302           % on input line\the\inputlineno%
5303           }%
5304           \let\anchor@spot\@empty
5305           \def\put@me@back{#2#3}%
5306         \fi
5307       \fi
5308     \fi
5309   \fi

```

```

5310 \ifHy@activeanchor
5311 \anchor@spot
5312 \else
5313 \hyper@anchor{#1}%
5314 \fi
5315 \expandafter\put@me@back
5316 \fi
5317 \let\anchor@spot\@empty
5318 }
5319 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5320 \ifHy@destlabel

\hyper@newdestlabel

5321 \def\hyper@newdestlabel#1#2{%
5322 \begingroup
5323 \Hy@safe@activetrue
5324 \edef\x{\endgroup
5325 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5326 }%
5327 \x
5328 }%

\hyper@destlabel@hook

5329 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5330 \newcommand*\Hy@DestRename[2]{%
5331 \ltx@ifundefined{HyDL!#1}{%
5332 \begingroup
5333 \Hy@safe@activetrue
5334 \edef\dest@name{#1}%
5335 \edef\label@name{#2}%
5336 \hyper@destlabel@hook
5337 \Hy@IsNotEmpty{dest@name}{%
5338 \Hy@IsNotEmpty{label@name}{%
5339 \global\expandafter
5340 \let\csname HyDL!#1\endcsname\ltx@empty
5341 \if@files
5342 \protected@write\@auxout{}{%
5343 \string\hyper@newdestlabel
5344 {#1}%
5345 {\label@name}%
5346 }%
5347 \fi
5348 }%
5349 }%
5350 \endgroup
5351 }{}%
5352 }%

```

\HyperDestRename

```

5353 \newcommand*{\HyperDestRename}[2]{%
5354 \AtBeginDocument{%
5355 \Hy@DestRename{#1}{#2}%
5356 }%
5357 }%
5358 \AtBeginDocument{%
5359 \let\HyperDestRename\Hy@DestRename
5360 }%

```

\Hy@IsNotEmpty

```

5361 \def\Hy@IsNotEmpty#1{%
5362 \ltx@ifundefined{#1}\ltx@gobble{%
5363 \expandafter\ifx\csname#1\endcsname\ltx@empty
5364 \expandafter\ltx@gobble
5365 \else
5366 \expandafter\ltx@firstofone
5367 \fi
5368 }%
5369 }%

5370 \ltx@GlobalAppendToMacro\label@hook{%
5371 \HyperDestRename\@currentHref\label@name
5372 }%

```

\HyperDestLabelReplace

```

5373 \def\HyperDestLabelReplace#1{%
5374 \ltx@ifundefined{HyDL@#1}{%
5375 #1%
5376 }{%
5377 \csname HyDL@#1\endcsname
5378 }%
5379 }%

```

\HyperDestNameFilter

```

5380 \let\HyperDestNameFilter\HyperDestLabelReplace
5381 \else

```

\hyper@newdestlabel

```

5382 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5383 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

```

5384 \fi
5385 \Hy@DisableOption{destlabel}

```

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

```

5386 \AddLineBeginAux{%
5387 \string\providecommand\string\hyper@newdestlabel[2]{}%
5388 }

```


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.

```
5389 \let\htmladding\hyperimage
5390 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5391 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5392 \def\htmlref#1#2{% anchor text, label
5393   \label@hyperref{#2}{#1}%
5394 }
```

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.

```
5395 \def\@@latextohtmlX{%
5396   \let\hhyperref\hyperref
5397   \def\hyperref##1##2##3##4{% anchor text for HTML
5398     % text to print before label in print
5399     % label
5400     % post-label text in print
5401     ##2\ref{##4}##3%
5402   }%
5403 }
```

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.

```
5404 \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
5405 \def\HyField@NewFlag#1#2{%
```

```

5406 \lowercase{\HyField@NewOption{#2}}}%
5407 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5408 }

```

\HyField@NewFlagOnly

```

5409 \def\HyField@NewFlagOnly#1#2{%
5410 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5411 }

```

\HyField@NewOption #1: option name

```

5412 \def\HyField@NewOption#1{%
5413 \expandafter\newif\csname ifFld@#1\endcsname
5414 \define@key{Field}{#1}[true]{%
5415 \lowercase{\Field@boolkey{##1}}{#1}%
5416 }%
5417 }

```

\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

```

5418 \def\HyField@NewBitsetFlag#1#2#3#4{%
5419 \begingroup
5420 \count@=#4\relax
5421 \advance\count@\m@ne
5422 \def\x##1{%
5423 \endgroup
5424 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5425 \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5426 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5427 (\number#4) #2%
5428 }%
5429 \else
5430 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5431 \csname HyField@#3@#1\endcsname
5432 /#2%
5433 }%
5434 \fi
5435 }%
5436 \expandafter\x\expandafter{\the\count@}%
5437 }

```

\HyField@UseFlag The bit set is HyField@#1

```

5438 \def\HyField@UseFlag#1#2{%
5439 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5440 }

```

\HyField@@UseFlag

```

5441 \def\HyField@@UseFlag#1#2{%
5442 \bitsetSetValue{HyField@#2}{%
5443 \csname HyField@#2@#1\endcsname
5444 }{%

```

```

5445 \csname ifFld@#1\endcsname 1\else 0\fi
5446 }%
5447 }

```

\HyField@SetFlag The bit set is HyField@#1

```

5448 \def\HyField@SetFlag#1#2{%
5449 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5450 }

```

\HyField@@SetFlag

```

5451 \def\HyField@@SetFlag#1#2{%
5452 \bitsetSetValue{HyField@#2}{%
5453 \csname HyField@#2@#1\endcsname
5454 }{1}%
5455 }

```

\HyField@PrintFlags

```

5456 \def\HyField@PrintFlags#1#2{%
5457 \ifHy@verbose
5458 \begingroup
5459 \let\Hy@temp\@empty
5460 \let\MessageBreak\relax
5461 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5462 \bitsetGetSetBitList{HyField@#1}\do{%
5463 \edef\Hy@temp{%
5464 \Hy@temp
5465 \csname HyField@#1@\x\endcsname\MessageBreak
5466 }%
5467 }%
5468 \edef\x{\endgroup
5469 \noexpand\Hy@Info{%
5470 Field flags: %
5471 \expandafter\ifx\@car#1\@nil S\else/\fi
5472 #1 %
5473 \bitsetGetDec{HyField@#1} %
5474 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5475 \Hy@temp
5476 for #2%
5477 }%
5478 }\x
5479 \fi
5480 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5481 \HyField@NewFlag{Ff}{ReadOnly}{1}
5482 \HyField@NewFlag{Ff}{Required}{2}
5483 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5484 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5485 \HyField@NewFlag{Ff}{Radio}{16}
5486 \HyField@NewFlag{Ff}{Pushbutton}{17}
5487 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```
5488 \HyField@NewFlag{Ff}{Multiline}{13}
5489 \HyField@NewFlag{Ff}{Password}{14}
5490 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5491 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5492 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5493 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5494 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
5495 \HyField@NewFlag{Ff}{Combo}{18}
5496 \HyField@NewFlag{Ff}{Edit}{19}
5497 \HyField@NewFlag{Ff}{Sort}{20}
5498 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5499 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5500 \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.

```
5501 \newif\ifFld@popdown
5502 \define@key{Field}{popdown}[true]{%
5503   \lowercase{\Field@boolkey{#1}}{popdown}%
5504 }
```

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.

```
5505 \HyField@NewFlag{F}{Invisible}{1}
5506 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5507 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5508 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5509 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5510 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5511 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5512 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5513 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5514 \ifHy@pdfa
5515   \def\HyField@PDFAFldWarning#1#2{%
5516     \Hy@Warning{%
5517       PDF/A: Annotation flag `#1' must\MessageBreak
5518       be set to `#2'%
5519     }%
5520   }%
5521   \Fld@invisiblefalse
5522   \def\Fld@invisibletrue{%
5523     \HyField@PDFAFldWarning{invisible}{false}%
5524   }%
5525   \Fld@hiddenfalse
5526   \def\Fld@hiddentrue{%
5527     \HyField@PDFAFldWarning{hidden}{false}%
5528   }%
```

```

5529 \Fld@printtrue
5530 \def\Fld@printfalse{%
5531   \HyField@PDFAFIagWarning{print}{true}%
5532 }%
5533 \Fld@nozoomtrue
5534 \def\Fld@nozoomfalse{%
5535   \HyField@PDFAFIagWarning{nozoom}{true}%
5536 }%
5537 \Fld@norotatetrue
5538 \def\Fld@norotatefalse{%
5539   \HyField@PDFAFIagWarning{norotate}{true}%
5540 }%
5541 \Fld@noviewfalse
5542 \def\Fld@noviewtrue{%
5543   \HyField@PDFAFIagWarning{noview}{false}%
5544 }%
5545 \fi

```

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

```

5546 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5547 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5548 \HyField@NewFlag{Submit}{GetMethod}{4}
5549 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5550 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5551 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5552 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5553 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5554 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5555 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5556 \HyField@NewFlag{Submit}{ExclFKey}{12}
5557 \HyField@NewFlag{Submit}{EmbedForm}{14}

5558 \define@key{Field}{export}{%
5559   \lowercase{\def\Hy@temp{#1}}%
5560   \@ifundefined{Fld@export@\Hy@temp}{%
5561     \@onelevel@sanitize\Hy@temp
5562     \Hy@Error{%
5563       Unknown export format `'\Hy@temp'.\MessageBreak
5564       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5565     }\@ehc
5566   }{%
5567     \let\Fld@export\Hy@temp
5568   }%
5569 }
5570 \def\Fld@export{fdf}
5571 \@namedef{Fld@export@fdf}{0}%
5572 \@namedef{Fld@export@html}{1}%
5573 \@namedef{Fld@export@xfdf}{2}%
5574 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5575 \def\HyField@FlagsSubmit{%
5576   \bitsetReset{HyField@Submit}%
5577   \ifcase\@nameuse{Fld@export@\Fld@export} %
5578     % FDF
5579     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5580     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5581     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5582     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5583     \HyField@UseFlag{Submit}{CanonicalFormat}%
5584     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5585     \HyField@UseFlag{Submit}{ExclFKey}%
5586     \HyField@UseFlag{Submit}{EmbedForm}%
5587   \or % HTML
5588     \HyField@SetFlag{Submit}{ExportFormat}%
5589     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5590     \HyField@UseFlag{Submit}{GetMethod}%
5591     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5592     \HyField@UseFlag{Submit}{CanonicalFormat}%
5593   \or % XFDF
5594     \HyField@SetFlag{Submit}{XFDF}%
5595     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5596     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5597     \HyField@UseFlag{Submit}{CanonicalFormat}%
5598   \or % PDF
5599     \HyField@SetFlag{Submit}{SubmitPDF}%
5600     \HyField@UseFlag{Submit}{GetMethod}%
5601   \fi
5602   \HyField@PrintFlags{Submit}{submit button field}%
5603   \bitsetIsEmpty{HyField@Submit}{%
5604     \let\Fld@submitflags\tx@empty
5605   }{%
5606     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5607   }%
5608 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5609 \def\HyField@FlagsAnnot#1{%
5610   \bitsetReset{HyField@F}%
5611   \HyField@UseFlag{F}{Invisible}%
5612   \HyField@UseFlag{F}{Hidden}%
5613   \HyField@UseFlag{F}{Print}%
5614   \HyField@UseFlag{F}{NoZoom}%
5615   \HyField@UseFlag{F}{NoRotate}%
5616   \HyField@UseFlag{F}{NoView}%
5617   \HyField@UseFlag{F}{Locked}%
5618   \HyField@UseFlag{F}{ToggleNoView}%
5619   \HyField@UseFlag{F}{LockedContents}%
5620   \HyField@PrintFlags{F}{#1}%
5621   \bitsetIsEmpty{HyField@F}{%
5622     \let\Fld@annotflags\tx@empty
5623   }{%
5624     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%

```

```

5625 }%
5626 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5627 \def\HyField@FlagsPushButton{%
5628   \HyField@FlagsAnnot{push button field}%
5629   \bitsetReset{HyField@Ff}%
5630   \HyField@UseFlag{Ff}{ReadOnly}%
5631   \HyField@UseFlag{Ff}{Required}%
5632   \HyField@UseFlag{Ff}{NoExport}%
5633   \HyField@SetFlag{Ff}{Pushbutton}%
5634   \HyField@PrintFlags{Ff}{push button field}%
5635   \bitsetIsEmpty{HyField@Ff}{%
5636     \let\Fld@flags\ltx@empty
5637   }{%
5638     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5639   }%
5640 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5641 \def\HyField@FlagsCheckBox{%
5642   \HyField@FlagsAnnot{check box field}%
5643   \bitsetReset{HyField@Ff}%
5644   \HyField@UseFlag{Ff}{ReadOnly}%
5645   \HyField@UseFlag{Ff}{Required}%
5646   \HyField@UseFlag{Ff}{NoExport}%
5647   \HyField@PrintFlags{Ff}{check box field}%
5648   \bitsetIsEmpty{HyField@Ff}{%
5649     \let\Fld@flags\ltx@empty
5650   }{%
5651     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5652   }%
5653 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5654 \def\HyField@FlagsRadioButton{%
5655   \HyField@FlagsAnnot{radio button field}%
5656   \bitsetReset{HyField@Ff}%
5657   \HyField@UseFlag{Ff}{ReadOnly}%
5658   \HyField@UseFlag{Ff}{Required}%
5659   \HyField@UseFlag{Ff}{NoExport}%
5660   \HyField@UseFlag{Ff}{NoToggleToOff}%
5661   \HyField@SetFlag{Ff}{Radio}%
5662   \HyField@UseFlag{Ff}{RadiosInUnison}%
5663   \HyField@PrintFlags{Ff}{radio button field}%
5664   \bitsetIsEmpty{HyField@Ff}{%
5665     \let\Fld@flags\ltx@empty

```

```

5666 }{%
5667 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5668 }%
5669 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5670 \def\HyField@FlagsText{%
5671 \HyField@FlagsAnnot{text field}%
5672 \bitsetReset{HyField@Ff}%
5673 \HyField@UseFlag{Ff}{ReadOnly}%
5674 \HyField@UseFlag{Ff}{Required}%
5675 \HyField@UseFlag{Ff}{NoExport}%
5676 \HyField@UseFlag{Ff}{Multiline}%
5677 \HyField@UseFlag{Ff}{Password}%
5678 \HyField@UseFlag{Ff}{FileSelect}%
5679 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5680 \HyField@UseFlag{Ff}{DoNotScroll}%
5681 \ifFld@comb
5682 \ifcase0\ifFld@multiline
5683 \else\ifFld@password
5684 \else\ifFld@fileselect
5685 \else 1\fi\fi\fi\relax
5686 \Hy@Error{%
5687 Field option `comb' cannot used together with\MessageBreak
5688 `multiline', `password', or `fileselect'%
5689 } \@ehc
5690 \else
5691 \HyField@UseFlag{Ff}{Comb}%
5692 \fi
5693 \fi
5694 \HyField@UseFlag{Ff}{RichText}%
5695 \HyField@PrintFlags{Ff}{text field}%
5696 \bitsetIsEmpty{HyField@Ff}%
5697 \let\Fld@flags\ltx@empty
5698 }{%
5699 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5700 }%
5701 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5702 \def\HyField@FlagsChoice{%
5703 \HyField@FlagsAnnot{choice field}%
5704 \bitsetReset{HyField@Ff}%
5705 \HyField@UseFlag{Ff}{ReadOnly}%
5706 \HyField@UseFlag{Ff}{Required}%
5707 \HyField@UseFlag{Ff}{NoExport}%
5708 \HyField@UseFlag{Ff}{Combo}%
5709 \ifFld@combo
5710 \HyField@UseFlag{Ff}{Edit}%

```



```

5711 \fi
5712 \HyField@UseFlag{Ff}{Sort}%
5713 \HyField@UseFlag{Ff}{MultiSelect}%
5714 \ifFld@combo
5715   \ifFld@edit
5716     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5717   \fi
5718 \fi
5719 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5720 \HyField@PrintFlags{Ff}{choice field}%
5721 \bitsetIsEmpty{HyField@Ff}{%
5722   \let\Fld@flags\ltx@empty
5723 }{%
5724   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5725 }%
5726 }

```

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`.

```

5727 \def\HyField@PDFChoices#1{%
5728   \begingroup
5729   \global\let\Fld@choices\ltx@empty
5730   \let\HyTmp@optlist\ltx@empty
5731   \let\HyTmp@optitem\relax
5732   \count@=0 %
5733   \kv@parse{#1}{%
5734     \Hy@pdfstringdef\kv@key\kv@key
5735     \ifx\kv@value\relax
5736       \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5737         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5738       \else
5739         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5740       \fi
5741     \else
5742       \Hy@pdfstringdef\kv@value\kv@value
5743       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5744     \fi
5745     \edef\HyTmp@optlist{%
5746       \HyTmp@optlist
5747       \HyTmp@optitem{\the\count@}{\kv@key}0%
5748     }%
5749     \advance\count@ by 1 %
5750     \@gobbletwo
5751   }%
5752   \xdef\Fld@choices{/Opt[\Fld@choices]}%
5753   \ifFld@multiselect
5754     \HyField@@PDFChoices{DV}\Fld@default
5755     \HyField@@PDFChoices{V}\Fld@value
5756   \else

```

```

5757 \ifx\Fld@default\relax
5758 \else
5759 \pdfstringdef\Hy@gtmp\Fld@default
5760 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtmp)}}%
5761 \fi
5762 \ifx\Fld@value\relax
5763 \else
5764 \pdfstringdef\Hy@gtmp\Fld@value
5765 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtmp)}}%
5766 \fi
5767 \fi
5768 \endgroup
5769 }

```

\HyField@@PDFChoices

```

5770 \def\HyField@@PDFChoices#1#2{%
5771 \ifx#2\relax
5772 \else
5773 \count@=0 %
5774 \def\HyTmp@optitem##1##2##3{%
5775 \def\HyTmp@key{##2}%
5776 \ifx\HyTmp@key\Hy@gtmp
5777 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5778 \HyTmp@optlist
5779 \HyTmp@optitem{##1}{##2}1%
5780 }%
5781 \let\HyTmp@found=Y%
5782 \else
5783 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5784 \HyTmp@optlist
5785 \HyTmp@optitem{##1}{##2}##3%
5786 }%
5787 \fi
5788 }%
5789 \expandafter\comma@parse\expandafter{#2}{%
5790 \pdfstringdef\Hy@gtmp\comma@entry
5791 \let\HyTmp@found=N %
5792 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5793 \HyTmp@optlist
5794 \ifx\HyTmp@found Y%
5795 \advance\count@ by 1 %
5796 \else
5797 \@onelevel@sanitize\comma@entry
5798 \PackageWarning{hyperref}{%
5799 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5800 \MessageBreak
5801 it cannot be found in the choices%
5802 }%
5803 \fi
5804 \@gobble
5805 }%
5806 \def\HyTmp@optitem##1##2##3{%
5807 \ifnum##3=1 %
5808 (##2)%

```

```

5809 \fi
5810 }%
5811 \ifcase\count@
5812 \or
5813 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5814 \else
5815 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5816 \ifx#1V%
5817 \def\HyTmp@optitem##1##2##3{%
5818 \ifnum##3=1 %
5819 \@firstofone{ ##1}%
5820 \fi
5821 }%
5822 \edef\HyTmp@optlist{\HyTmp@optlist}%
5823 \xdef\Fld@choices{%
5824 \Fld@choices
5825 /I\expandafter\@firstofone\HyTmp@optlist}%
5826 }%
5827 \fi
5828 \fi
5829 \fi
5830 }

```

20.3 Forms

\HyField@SetKeys

```

5831 \def\HyField@SetKeys{%
5832 \kvsetkeys{Field}%
5833 }

5834 \newif\ifFld@checked
5835 \newif\ifFld@disabled
5836 \Fld@checkedfalse
5837 \Fld@disabledfalse
5838 \newcount\Fld@menulength
5839 \newdimen\Field@Width
5840 \newdimen\Fld@charsize
5841 \Fld@charsize=10\p@
5842 \def\Fld@maxlen{0}
5843 \def\Fld@align{0}
5844 \def\Fld@color{0 0 0 rg}
5845 \def\Fld@bcolor{1 1 1}
5846 \def\Fld@bordercolor{1 0 0}
5847 \def\Fld@bordersep{1\p@}
5848 \def\Fld@borderwidth{1}
5849 \def\Fld@borderstyle{S}
5850 \def\Fld@cbsymbol{4}
5851 \def\Fld@radiosymbol{H}
5852 \def\Fld@rotation{0}
5853 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5854 \def\endForm{\@endForm}
5855 \newif\ifForm@html
5856 \Form@htmlfalse
5857 \def\Form@boolkey#1#2{%

```

```

5858 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5859 }
5860 \define@key{Form}{action}{%
5861 \hyper@normalise\Hy@DefFormAction{#1}%
5862 }
5863 \def\Hy@DefFormAction{\def\Form@action}
5864 \def\enc@html{html}
5865 \define@key{Form}{encoding}{%
5866 \def\Hy@tempa{#1}%
5867 \ifx\Hy@tempa\enc@html
5868 \Form@htmltrue
5869 \def\Fld@export{html}%
5870 \else
5871 \Hy@Warning{%
5872 Form `encoding' key with \MessageBreak
5873 unknown value `#1'%
5874 }%
5875 \Form@htmlfalse
5876 \fi
5877 }
5878 \define@key{Form}{method}{%
5879 \lowercase{\def\Hy@temp{#1}}%
5880 \@ifundefined{Form@method@\Hy@temp}{%
5881 \@onelevel@sanitize\Hy@temp
5882 \Hy@Error{%
5883 Unknown method ``\Hy@temp'.\MessageBreak
5884 Known values are `post' and `get'%
5885 } \@ehc
5886 }{%
5887 \let\Form@method\Hy@temp
5888 \ifcase\@nameuse{Form@method@\Hy@temp} %
5889 \Fld@getmethodfalse
5890 \else
5891 \Fld@getmethodtrue
5892 \fi
5893 }%
5894 }
5895 \def\Form@method{}
5896 \@namedef{Form@method@post}{0}
5897 \@namedef{Form@method@get}{1}

5898 \newif\ifHyField@NeedAppearances
5899 \def\HyField@NeedAppearancesfalse{%
5900 \global\let\ifHyField@NeedAppearances\iffalse
5901 }
5902 \def\HyField@NeedAppearancetrue{%
5903 \global\let\ifHyField@NeedAppearances\iftrue
5904 }
5905 \HyField@NeedAppearancetrue
5906 \define@key{Form}{NeedAppearances}[true]{%
5907 \edef\Hy@tempa{#1}%
5908 \ifx\Hy@tempa\Hy@true
5909 \HyField@NeedAppearancetrue
5910 \else
5911 \ifx\Hy@tempa\Hy@false

```

```

5912 \HyField@NeedAppearancesfalse
5913 \else
5914 \Hy@Error{%
5915 Unexpected value ``\Hy@tempa'\MessageBreak
5916 of option `NeedAppearances' instead of\MessageBreak
5917 `true' or `false'%
5918 } \@ehc
5919 \fi
5920 \fi
5921 }
5922 \def\Field@boolkey#1#2{%
5923 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5924 }
5925 \ifHy@texht
5926 \newtoks\Field@toks
5927 \Field@toks={ }%
5928 \def\Field@addtoks#1#2{%
5929 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5930 \@processme
5931 }%
5932 \else
5933 \def\Hy@WarnHTMLFieldOption#1{%
5934 \Hy@Warning{%
5935 HTML field option `#1'\MessageBreak
5936 is ignored%
5937 }%
5938 }%
5939 \fi
5940 \def\Fld@checkequals#1=#2=#3\\{%
5941 \def\@currDisplay{#1}%
5942 \ifx\\#2\\%
5943 \def\@currValue{#1}%
5944 \else
5945 \def\@currValue{#2}%
5946 \fi
5947 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5948 }
5949 \define@key{Field}{loc}{%
5950 \def\Fld@loc{#1}%
5951 }
5952 \define@key{Field}{checked}[true]{%
5953 \lowercase{\Field@boolkey{#1}}{checked}%
5954 }
5955 \define@key{Field}{disabled}[true]{%
5956 \lowercase{\Field@boolkey{#1}}{disabled}%
5957 }
5958 \ifHy@texht
5959 \define@key{Field}{accesskey}{%
5960 \Field@addtoks{accesskey}{#1}%
5961 }%
5962 \define@key{Field}{tabkey}{%
5963 \Field@addtoks{tabkey}{#1}%
5964 }%
5965 \else

```

```

5966 \define@key{Field}{accesskey}{%
5967   \Hy@WarnHTMLFieldOption{accesskey}%
5968 }%
5969 \define@key{Field}{tabkey}{%
5970   \Hy@WarnHTMLFieldOption{tabkey}%
5971 }%
5972 \fi
5973 \define@key{Field}{name}{%
5974   \def\Fld@name{#1}%
5975 }
5976 \let\Fld@altname\relax
5977 \define@key{Field}{altname}{%
5978   \def\Fld@altname{#1}%
5979 }
5980 \let\Fld@mappingname\relax
5981 \define@key{Field}{mappingname}{%
5982   \def\Fld@mappingname{#1}%
5983 }
5984 \define@key{Field}{width}{%
5985   \def\Fld@width{#1}%
5986   \Field@Width#1\setbox0=\hbox{m}%
5987 }
5988 \define@key{Field}{maxlen}{%
5989   \def\Fld@maxlen{#1}%
5990 }
5991 \define@key{Field}{menulength}{%
5992   \Fld@menulength=#1\relax
5993 }
5994 \define@key{Field}{height}{%
5995   \def\Fld@height{#1}%
5996 }
5997 \define@key{Field}{charsize}{%
5998   \setlength{\Fld@charsize}{#1}%
5999 }
6000 \define@key{Field}{borderwidth}{%
6001   \Hy@defaultbp\Fld@borderwidth{#1}%
6002 }
6003 \def\Hy@defaultbp#1#2{%
6004   \begingroup
6005   \afterassignment\Hy@defaultbpAux
6006   \dimen@=#2bp\relax{#1}{#2}%
6007 }
6008 \begingroup\expandafter\expandafter\expandafter\endgroup
6009 \expandafter\ifx\csname dimexpr\endcsname\relax
6010   \def\Hy@defaultbpAux#1\relax#2#3{%
6011     \ifx!#1!%
6012       \endgroup
6013       \def#2{#3}%
6014     \else
6015       \dimen@=.99626\dimen@
6016       \edef\x{\endgroup
6017         \def\noexpand#2{%
6018           \strip@pt\dimen@
6019         }%

```

```

6020     }\x
6021     \fi
6022 }%
6023 \else
6024 \def\Hy@defaultbpAux#1\relax#2#3{%
6025     \ifx!#1!%
6026         \endgroup
6027         \def#2{#3}%
6028     \else
6029         \edef\x{\endgroup
6030             \def\noexpand#2{%
6031                 \strip@pt\dimexpr\dimen@*800/803\relax
6032             }%
6033         }\x
6034     \fi
6035 }%
6036 \fi
6037 \define@key{Field}{borderstyle}{%
6038     \let\Hy@temp\Fld@borderstyle
6039     \def\Fld@borderstyle{#1}%
6040     \Hy@Match\Fld@borderstyle}{%
6041         ~[SDBIU]$%
6042     }{}{%
6043         \Hy@Warning{%
6044             Invalid value `~\@pdfborderstyle'\MessageBreak
6045             for option `pdfborderstyle'. Valid values:\MessageBreak
6046             \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6047             \space\space I (Inset), U (Underline)\MessageBreak
6048             Option setting is ignored%
6049         }%
6050         \let\Fld@borderstyle\Hy@temp
6051     }%
6052 }
6053 \define@key{Field}{bordersep}{%
6054     \def\Fld@bordersep{#1}%
6055 }
6056 \define@key{Field}{default}{%
6057     \Hy@pdfstringdef\Fld@default{#1}%
6058 }
6059 \define@key{Field}{align}{%
6060     \def\Fld@align{#1}%
6061 }
6062 \define@key{Field}{value}{%
6063     \Hy@pdfstringdef\Fld@value{#1}%
6064 }
6065 \define@key{Field}{checkboxsymbol}{%
6066     \Fld@DingDef\Fld@cbsymbol{#1}%
6067 }
6068 \define@key{Field}{radiosymbol}{%
6069     \Fld@DingDef\Fld@radiosymbol{#1}%
6070 }
6071 \def\Fld@DingDef#1#2{%
6072     \let\Fld@temp\ltx@empty
6073     \Fld@@@DingDef#2\ding{}}\@nil

```

```

6074 \let#1\Fld@temp
6075 }
6076 \def\Fld@@DingDef#1\ding#2#3\@nil{%
6077 \expandafter\def\expandafter\Fld@temp\expandafter{%
6078 \Fld@temp
6079 #1%
6080 }%
6081 \ifx\\#3\\%
6082 \expandafter\@gobble
6083 \else
6084 \begingroup
6085 \lccode`0=#2\relax
6086 \lowercase{\endgroup
6087 \expandafter\def\expandafter\Fld@temp\expandafter{%
6088 \Fld@temp
6089 0%
6090 }%
6091 }%
6092 \expandafter\@firstofone
6093 \fi
6094 {%
6095 \Fld@@DingDef#3\@nil
6096 }%
6097 }

6098 \define@key{Field}{rotation}{%
6099 \def\Fld@rotation{#1}%
6100 }

6101 \define@key{Field}{backgroundcolor}{%
6102 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6103 }
6104 \define@key{Field}{bordercolor}{%
6105 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6106 }
6107 \define@key{Field}{color}{%
6108 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6109 }

6110 \let\Fld@onclick@code\ltx@empty
6111 \let\Fld@format@code\ltx@empty
6112 \let\Fld@validate@code\ltx@empty
6113 \let\Fld@calculate@code\ltx@empty
6114 \let\Fld@keystroke@code\ltx@empty
6115 \let\Fld@onfocus@code\ltx@empty
6116 \let\Fld@onblur@code\ltx@empty
6117 \let\Fld@onmousedown@code\ltx@empty
6118 \let\Fld@onmouseup@code\ltx@empty
6119 \let\Fld@onenter@code\ltx@empty
6120 \let\Fld@onexit@code\ltx@empty
6121 \def\Hy@temp#1{%
6122 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6123 }
6124 \def\Hy@@temp#1#2{%
6125 \ifHy@pdfa
6126 \define@key{Field}{#2}{%

```



```

6127 \Hy@Error{%
6128     PDF/A: Additional action `#2' is prohibited%
6129 }\@ehc
6130 }%
6131 \else
6132 \define@key{Field}{#2}{%
6133     \def#1{##1}%
6134 }%
6135 \fi
6136 }
6137 \Hy@temp{keystroke}
6138 \Hy@temp{format}
6139 \Hy@temp{validate}
6140 \Hy@temp{calculate}
6141 \Hy@temp{onfocus}
6142 \Hy@temp{onblur}
6143 \Hy@temp{onenter}
6144 \Hy@temp{onexit}

6145 \let\Fld@calculate@sortkey\ltx@empty
6146 \define@key{Field}{calculatesortkey}[1]{%
6147     \def\Fld@calculate@sortkey{#1}%
6148 }

6149 \ifHy@texht
6150 \def\Hy@temp#1{%
6151     \define@key{Field}{#1}{%
6152         \Field@addtoks{#1}{##1}%
6153     }%
6154 }%
6155 \else
6156 \def\Hy@temp#1{%
6157     \define@key{Field}{#1}{%
6158         \Hy@WarnHTMLFieldOption{#1}%
6159     }%
6160 }%
6161 \fi
6162 \Hy@temp{ondblclick}
6163 \Hy@temp{onmousedown}
6164 \Hy@temp{onmouseup}
6165 \Hy@temp{onmouseover}
6166 \Hy@temp{onmousemove}
6167 \Hy@temp{onmouseout}
6168 \Hy@temp{onkeydown}
6169 \Hy@temp{onkeyup}
6170 \Hy@temp{onselect}
6171 \Hy@temp{onchange}
6172 \Hy@temp{onkeypress}
6173 \ifHy@texht
6174 \define@key{Field}{onclick}{%
6175     \Field@addtoks{onclick}{#1}%
6176 }%
6177 \else
6178 \ifHy@pdfa
6179     \define@key{Field}{onclick}{%

```

```

6180 \Hy@Error{%
6181 PDF/A: Action `onclick' is prohibited%
6182 }\@ehc
6183 }%
6184 \else
6185 \define@key{Field}{onclick}{%
6186 \def\Fld@onclick@code{#1}%
6187 }%
6188 \fi
6189 \fi

6190 \DeclareRobustCommand\TextField{%
6191 \@ifnextchar[{\@TextField}{\@TextField[]}%
6192 }
6193 \DeclareRobustCommand\ChoiceMenu{%
6194 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6195 }
6196 \DeclareRobustCommand\CheckBox{%
6197 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6198 }
6199 \DeclareRobustCommand\PushButton{%
6200 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6201 }
6202 \DeclareRobustCommand\Gauge{%
6203 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6204 }
6205 \DeclareRobustCommand\Submit{%
6206 \@ifnextchar[{\@Submit}{\@Submit[]}%
6207 }
6208 \DeclareRobustCommand\Reset{%
6209 \@ifnextchar[{\@Reset}{\@Reset[]}%
6210 }
6211 \def\LayoutTextField#1#2{% label, field
6212 \def\Hy@temp{#1}%
6213 \ifx\Hy@temp\@empty
6214 #2%
6215 \else
6216 #1 #2%
6217 \fi
6218 }
6219 \def\LayoutChoiceField#1#2{% label, field
6220 \def\Hy@temp{#1}%
6221 \ifx\Hy@temp\@empty
6222 #2%
6223 \else
6224 #1 #2%
6225 \fi
6226 }
6227 \def\LayoutCheckField#1#2{% label, field
6228 \def\Hy@temp{#1}%
6229 \ifx\Hy@temp\@empty
6230 #2%
6231 \else
6232 #1 #2%
6233 \fi

```

```

6234 }
6235 \def\LayoutPushButtonField#1{% button
6236   #1%
6237 }
6238 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6239 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6240 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6241 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6242 \def\MakeButtonField#1{%
6243   \sbox0{%
6244     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6245   }%
6246   \@tempdima\ht0 %
6247   \advance\@tempdima by \Fld@borderwidth bp %
6248   \advance\@tempdima by \Fld@borderwidth bp %
6249   \ht0\@tempdima
6250   \@tempdima\dp0 %
6251   \advance\@tempdima by \Fld@borderwidth bp %
6252   \advance\@tempdima by \Fld@borderwidth bp %
6253   \dp0\@tempdima
6254   \box0\relax
6255 }
6256 \def\DefaultHeightofSubmit{14pt}
6257 \def\DefaultWidthofSubmit{2cm}
6258 \def\DefaultHeightofReset{14pt}
6259 \def\DefaultWidthofReset{2cm}
6260 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6261 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6262 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6263 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6264 \def\DefaultHeightofText{\normalbaselineskip}
6265 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6266 \def\DefaultWidthofText{3cm}
6267 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6268 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6269 \def\DefaultOptionsofPushButton{print}
6270 \def\DefaultOptionsofCheckBox{print}
6271 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6272 \def\DefaultOptionsofListBox{print}
6273 \def\DefaultOptionsofComboBox{print,edit,sort}
6274 \def\DefaultOptionsofPopdownBox{print}
6275 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6276 \ifHy@hyperfigures
6277   \Hy@Info{Hyper figures ON}%
6278 \else
6279   \Hy@Info{Hyper figures OFF}%
6280 \fi
6281 \ifHy@nesting

```

```

6282 \Hy@Info{Link nesting ON}%
6283 \else
6284 \Hy@Info{Link nesting OFF}%
6285 \fi
6286 \ifHy@hyperindex
6287 \Hy@Info{Hyper index ON}%
6288 \else
6289 \Hy@Info{Hyper index OFF}%
6290 \fi
6291 \ifHy@backref
6292 \Hy@Info{backreferencing ON}%
6293 \else
6294 \Hy@Info{backreferencing OFF}%
6295 \fi
6296 \ifHy@colorlinks
6297 \Hy@Info{Link coloring ON}%
6298 \else
6299 \Hy@Info{Link coloring OFF}%
6300 \fi
6301 \ifHy@ocgcolorlinks
6302 \Hy@Info{Link coloring with OCG ON}%
6303 \else
6304 \Hy@Info{Link coloring with OCG OFF}%
6305 \fi
6306 \ifHy@pdfa
6307 \Hy@Info{PDF/A mode ON}%
6308 \else
6309 \Hy@Info{PDF/A mode OFF}%
6310 \fi

```

22 Low-level utility macros

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

```

6311 \edef\hyper@hash{\string#}
6312 \edef\hyper@tilde{\string~}
6313 \edef\hyper@quote{\string"}

```

Support `\label` before `\begin{document}`.

```

6314 \def\@currentHref{Doc-Start}
6315 \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.

```

6316 \Hy@AtBeginDocument{%
6317 \Hy@pdfstringtrue
6318 \PDF@SetupDoc
6319 \let\PDF@SetupDoc\@empty
6320 \Hy@DisableOption{pdfpagescrop}%
6321 \Hy@DisableOption{pdfpagemode}%
6322 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6323 \Hy@DisableOption{pdfdirection}%
6324 \Hy@DisableOption{pdfviewarea}%
6325 \Hy@DisableOption{pdfviewclip}%

```

```

6326 \Hy@DisableOption{pdfprintarea}%
6327 \Hy@DisableOption{pdfprintclip}%
6328 \Hy@DisableOption{pdfprintscaling}%
6329 \Hy@DisableOption{pdfduplex}%
6330 \Hy@DisableOption{pdfpicktraybypdftype}%
6331 \Hy@DisableOption{pdfprintpagerange}%
6332 \Hy@DisableOption{pdfnumcopies}%
6333 \Hy@DisableOption{pdfstartview}%
6334 \Hy@DisableOption{pdfstartpage}%
6335 \Hy@DisableOption{pdftoolbar}%
6336 \Hy@DisableOption{pdfmenubar}%
6337 \Hy@DisableOption{pdfwindowui}%
6338 \Hy@DisableOption{pdfitwindow}%
6339 \Hy@DisableOption{pdfcenterwindow}%
6340 \Hy@DisableOption{pdfdisplaydoctitle}%
6341 \Hy@DisableOption{pdfpagelayout}%
6342 \Hy@DisableOption{pdflang}%
6343 \Hy@DisableOption{baseurl}%
6344 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6345 \Hy@pdfstringfalse
6346 }

```

Ignore star from referencing macros:

```

6347 \LetLtxMacro\NoHy@OrgRef\ref
6348 \DeclareRobustCommand*{\ref}{%
6349 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6350 }
6351 \LetLtxMacro\NoHy@OrgPageRef\pageref
6352 \DeclareRobustCommand*{\pageref}{%
6353 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6354 }

```

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.

```

6355 \def\NoHyper{%
6356 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6357 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6358 \global\let\hyper@livelink\hyper@link
6359 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6360 \let\hyper@anchor\ltx@gobble
6361 \let\hyper@anchorstart\ltx@gobble
6362 \def\hyper@anchorend{\Hy@xspace@end}%
6363 \let\hyper@linkstart\ltx@gobbletwo
6364 \def\hyper@linkend{\Hy@xspace@end}%
6365 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6366 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6367 \let\Hy@backout\@gobble
6368 }
6369 \def\stop@hyper{%

```

```

6370 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6371 \let\Hy@backout\@gobble
6372 \let\hyper@@anchor\ltx@gobble
6373 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6374 \let\hyper@anchor\ltx@gobble
6375 \let\hyper@anchorstart\ltx@gobble
6376 \def\hyper@anchorend{\Hy@xspace@end}%
6377 \let\hyper@linkstart\ltx@gobbletwo
6378 \def\hyper@linkend{\Hy@xspace@end}%
6379 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6380 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6381 }
6382 \def\endNoHyper{%
6383 \global\let\hyper@link\hyper@livelink
6384 }
6385 \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:

```

6386 \*nohyperref
6387 \RequirePackage{letltxmacro}[2008/06/13]
6388 \let\hyper@@anchor\@gobble
6389 \def\hyper@link#1#2#3{#3}%
6390 \let\hyper@anchorstart\@gobble
6391 \let\hyper@anchorend\@empty
6392 \let\hyper@linkstart\@gobbletwo
6393 \let\hyper@linkend\@empty
6394 \def\hyper@linkurl#1#2{#1}%
6395 \def\hyper@linkfile#1#2#3{#1}%
6396 \def\hyper@link@[#1]#2#3{#3}%
6397 \let\PDF@SetupDoc\@empty
6398 \let\PDF@FinishDoc\@empty
6399 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6400 \def\Acrobatmenu#1#2{\leavevmode#2}
6401 \let\pdfstringdefDisableCommands\@gobbletwo
6402 \let\texorpdfstring\@firstoftwo
6403 \let\pdfbookmark\@undefined
6404 \newcommand\pdfbookmark[3]{}
6405 \let\phantomsection\@empty
6406 \let\hypersetup\@gobble
6407 \let\hyperbaseurl\@gobble
6408 \newcommand*{\href}[3]{}
6409 \let\hyperdef\@gobbletwo
6410 \let\hyperlink\@gobble
6411 \let\hypertarget\@gobble

```

```

6412 \def\hyperref{%
6413   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6414 }
6415 \long\def\@gobbleopt[#1]{%
6416 \let\hyperpage\@empty
Ignore star from referencing macros:
6417 \LetLtxMacro\NoHy@OrgRef\ref
6418 \DeclareRobustCommand*{\ref}{%
6419   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6420 }
6421 \LetLtxMacro\NoHy@OrgPageRef\pageref
6422 \DeclareRobustCommand*{\pageref}{%
6423   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6424 }
6425 \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}`

```

6426 \*package
6427 \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.

```

6428 \if@filesw
6429   \ifHy@typexml
6430     \immediate\closeout\@mainaux
6431     \immediate\openout\@mainaux\jobname.aux\relax
6432     \immediate\write\@auxout{<relaxxml>\relax}%
6433   \fi
6434   \immediate\write\@auxout{%
6435     \string\providecommand\string\HyperFirstAtBeginDocument{%
6436       \string\AtBeginDocument}^^J%
6437     \string\HyperFirstAtBeginDocument{%
6438       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6439       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6440       \string\gdef\string\contentsline%
6441         \string#1\string#2\string#3\string#4{%
6442           \string\oldcontentsline%
6443             {\string#1}{\string#2}{\string#3}}^^J%
6444       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6445       \string\gdef\string\newlabel\string#1\string#2{%
6446         \string\newlabelxx{\string#1}\string#2}^^J%
6447       \string\gdef\string\newlabelxx%
6448         \string#1\string#2\string#3\string#4\string#5\string#6{%
6449         \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.

```

6450     \string\AtEndDocument{%

```

```

6451      \string\ifx\string\hyper@anchor\string\@undefined^^J%
6452      \string\let\string\contentsline\string\oldcontentsline^^J%
6453      \string\let\string\newlabel\string\oldnewlabel^^J%
6454      \string\fi%
6455  }^^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.

```

6456      \string\fi%
6457  }^^J%
6458  \string\global\string\let\string\hyper@last\relax^^J%
6459  \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6460 }%
6461 \fi
6462 \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.

```

6463 \ifx\hyper@last\@undefined
6464   \def\@starttoc#1{%
6465     \begingroup
6466       \makeatletter
6467       \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6468       \IfFileExists{\jobname.#1}{%
6469         \Hy@WarningNoLine{%
6470           old #1 file detected, not used; run LaTeX again%
6471         }%
6472       }{}%
6473       \if@filesw
6474         \expandafter\newwrite\csname tf@#1\endcsname
6475         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6476       \fi
6477       \@nobreakfalse
6478     \endgroup
6479   }%
6480   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
6481 \fi
6482 }

```

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`.

```

6483 \ifHy@pdfusetitle
6484   \let\HyOrg@title\title
6485   \let\HyOrg@author\author
6486   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6487   \def\Hy@scanopttitle[#1]{%
6488     \gdef\Hy@title{#1}%
6489     \HyOrg@title{#1}%

```



```

6490 }%
6491 \def\Hy@scantitle#1{%
6492   \gdef\Hy@title{#1}%
6493   \HyOrg@title{#1}%
6494 }%
6495 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6496 \def\Hy@scanoptauthor[#1]{%
6497   \gdef\Hy@author{#1}%
6498   \HyOrg@author{#1}%
6499 }%
6500 \def\Hy@scanauthor#1{%
6501   \gdef\Hy@author{#1}%
6502   \HyOrg@author{#1}%
6503 }%

```

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.

```

6504 \begingroup
6505   \def\process@me#1\@nil#2{%
6506     \expandafter\let\expandafter\x\csname @#2\endcsname
6507     \edef\y{\expandafter\strip@prefix\meaning\x}%
6508     \def\c##1##2\@nil{%
6509       \ifx\\##1\\%
6510         \else
6511           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6512             \expandafter{\x}%
6513         \fi
6514       }%
6515       \expandafter\c\y\relax#1\@nil
6516     }%
6517     \expandafter\process@me\string\@latex@\@nil{title}%
6518     \expandafter\process@me\string\@latex@\@nil{author}%
6519   \endgroup
6520 \fi
6521 \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 ¹ removes its argument.

```

6522 \def\Hy@UseMaketitleString#1{%
6523   \ltx@ifundefined{Hy@#1}{}%
6524   \begingroup
6525     \let\Hy@saved@hook\pdfstringdefPreHook
6526     \pdfstringdefDisableCommands{%
6527       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6528       \let\newline\\%

```

```

6529     \def\and{; }%
6530     \let\thanks\@gobble%
6531 }%
6532 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6533     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6534         \csname Hy@#1\endcsname\@empty
6535     }%
6536 \fi
6537 \global\let\pdfstringdefPreHook\Hy@saved@hook
6538 \endgroup
6539 }%
6540 }
6541 \def\Hy@newline@title#1{ #1}
6542 \def\Hy@newline@author#1{, #1}
6543 \def\Hy@UseMaketitleInfos{%
6544     \Hy@UseMaketitleString{title}%
6545     \Hy@UseMaketitleString{author}%
6546 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6547 \RequirePackage{atbegshi}[2007/09/09]
6548 \let\Hy@EveryPageHook\ltx@empty
6549 \let\Hy@EveryPageBoxHook\ltx@empty
6550 \let\Hy@FirstPageHook\ltx@empty
6551 \AtBeginShipout{%
6552     \Hy@EveryPageHook
6553     \ifx\Hy@EveryPageBoxHook\ltx@empty
6554     \else
6555         \setbox\AtBeginShipoutBox=\vbox{%
6556             \offinterlineskip
6557             \Hy@EveryPageBoxHook
6558             \box\AtBeginShipoutBox
6559         }%
6560     \fi
6561 }
6562 \ltx@iffileloaded{hpdftex.def}{%
6563     \AtBeginShipout{%
6564         \Hy@FirstPageHook
6565         \global\let\Hy@FirstPageHook\ltx@empty
6566     }%
6567 }{%
6568     \AtBeginShipoutFirst{%
6569         \Hy@FirstPageHook
6570     }%
6571 }
6572 \g@addto@macro\Hy@FirstPageHook{%
6573     \PDF@FinishDoc

```

```

6574 \global\let\PDF@FinishDoc\ltx@empty
6575 }

```

28.1 PDF /PageLabels

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

```

6576 \ifHy@pdfpagelabels
6577 \begingroup\expandafter\expandafter\expandafter\endgroup
6578 \expandafter\ifx\csname thepage\endcsname\relax
6579 \Hy@pdfpagelabelsfalse
6580 \Hy@WarningNoLine{%
6581 Option `pdfpagelabels' is turned off\MessageBreak
6582 because \string\thepage\space is undefined%
6583 }%
6584 \csname fi\endcsname
6585 \csname iffalse\expandafter\endcsname
6586 \fi

```

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

```

6587 \def\thispdfpagelabel#1{%
6588 \gdef\HyPL@thisLabel{#1}%
6589 }%
6590 \global\let\HyPL@thisLabel\relax

```

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

```

6591 \let\HyPL@Labels\ltx@empty

```

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

```

6592 \newcount\Hy@abspage
6593 \Hy@abspage=0 %

```

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

```

6594 \def\HyPL@LastType{init}%
6595 \def\HyPL@LastNumber{0}%
6596 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6597 \def\HyPL@arabic{D}%
6598 \def\HyPL@Roman{R}%
6599 \def\HyPL@roman{r}%
6600 \def\HyPL@Alph{A}%
6601 \def\HyPL@alph{a}%
6602 \let\HyPL@SlidesSetPage\ltx@empty
6603 \ltx@ifclassloaded{slides}{%
6604 \def\HyPL@SlidesSetPage{%
6605 \advance\c@page\ltx@one
6606 \ifnum\value{page}>\ltx@one
6607 \protected@edef\HyPL@SlidesOptionalPage{%
6608 \Hy@SlidesFormatOptionalPage{\thepage}%
6609 }%
6610 \else

```

```

6611     \let\HyPL@SlidesOptionalPage\ltx@empty
6612   \fi
6613   \advance\c@page-\ltx@one
6614   \def\HyPL@page{%
6615     \csname the\Hy@SlidesPage\endcsname
6616     \HyPL@SlidesOptionalPage
6617   }%
6618 }%
6619 }{}%

```

`\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.

```

6620 \def\HyPL@EveryPage{%
6621   \begingroup
6622   \ifx\HyPL@thisLabel\relax
6623     \let\HyPL@page\thepage
6624     \HyPL@SlidesSetPage
6625   \else
6626     \let\HyPL@page\HyPL@thisLabel
6627     \global\let\HyPL@thisLabel\relax
6628   \fi
6629   \let\HyPL@Type\relax
6630   \ifnum\c@page>0 %
6631     \ifx\HyPL@SlidesSetPage\ltx@empty
6632       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6633     \fi
6634   \fi
6635   \let\Hy@temp Y%
6636   \ifx\HyPL@Type\HyPL@LastType
6637   \else
6638     \let\Hy@temp N%
6639   \fi
6640   \ifx\HyPL@Type\relax
6641     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6642   \else
6643     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6644   \fi
6645   \ifx\HyPL@Prefix\HyPL@LastPrefix
6646   \else
6647     \let\Hy@temp N%
6648   \fi
6649   \if Y\Hy@temp
6650     \advance\c@page by -1 %
6651     \ifnum\HyPL@LastNumber=\the\c@page\relax
6652     \else
6653       \let\Hy@temp N%
6654     \fi
6655     \Hy@StepCount\c@page
6656   \fi
6657   \if N\Hy@temp
6658     \ifx\HyPL@Type\relax
6659       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6660     \else
6661       \HyPL@StorePageLabel{%

```

```

6662     \ifx\HyPL@Prefix\@empty
6663     \else
6664       /P(\HyPL@Prefix)%
6665     \fi
6666     /S/\csname HyPL\HyPL@Type\endcsname
6667     \ifnum\the\c@page=1 %
6668     \else
6669       \space/St \the\c@page
6670     \fi
6671   }%
6672 \fi
6673 \fi
6674 \xdef\HyPL@LastNumber{\the\c@page}%
6675 \global\let\HyPL@LastType\HyPL@Type
6676 \global\let\HyPL@LastPrefix\HyPL@Prefix
6677 \endgroup
6678 \Hy@GlobalStepCount\Hy@abspage
6679 }%

```

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

```

6680 \def\HyPL@CheckThePage#1\@nil{%
6681   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6682 }%

```

`\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`.

```

6683 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6684   \def\Hy@tempa{#4}%
6685   \def\Hy@tempb{\csname\endcsname\c@page}%
6686   \ifx\Hy@tempa\Hy@tempb
6687     \expandafter\ifx\csname HyPL#3\endcsname\relax
6688     \else
6689       \def\HyPL@Type{#3}%
6690       \def\HyPL@Prefix{#2}%
6691     \fi
6692   \else
6693     \begingroup
6694     \let\Hy@next\endgroup
6695     \let\HyPL@found\@undefined
6696     \def\arabic{\HyPL@Format{arabic}}%
6697     \def\Roman{\HyPL@Format{Roman}}%
6698     \def\roman{\HyPL@Format{roman}}%
6699     \def\Alph{\HyPL@Format{Alph}}%
6700     \def\alph{\HyPL@Format{alph}}%
6701     \protected@edef\Hy@temp{#1}%
6702     \ifx\HyPL@found\relax
6703       \toks@\expandafter{\Hy@temp}%
6704       \edef\Hy@next{\endgroup
6705         \noexpand\HyPL@@@CheckThePage\the\toks@
6706         \noexpand\HyPL@found\relax\noexpand\@nil
6707       }%

```

```

6708     \fi
6709     \Hy@next
6710 \fi
6711 }%

```

`\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`.

```

6712 \def\HyPL@Format#1#2{%
6713   \ifx\HyPL@found\@undefined
6714     \expandafter\ifx\csname c@#2\endcsname\c@page
6715       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6716     \else
6717       \expandafter\noexpand\csname#1\endcsname{#2}%
6718     \fi
6719   \else
6720     \expandafter\noexpand\csname#1\endcsname{#2}%
6721   \fi
6722 }%

```

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

```

6723 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6724   \def\Hy@tempa{#3}%
6725   \def\Hy@tempb{\HyPL@found\relax}%
6726   \ifx\Hy@tempa\Hy@tempb
6727     \def\HyPL@Type{#2}%
6728     \def\HyPL@Prefix{#1}%
6729   \fi
6730 }%

```

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

```

6731 \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`.

```

6732 \def\HyPL@Useless{0<</S/D>>}%
6733 \@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.

```

6734 \def\HyPL@SetPageLabels{%
6735   \@onelevel@sanitize\HyPL@Labels
6736   \ifx\HyPL@Labels\@empty
6737   \else
6738     \ifx\HyPL@Labels\HyPL@Useless
6739     \else
6740       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6741     \fi
6742   \fi
6743 }%

```

```

6744 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6745 \fi

```

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

```

6746 \Hy@DisableOption{pdfpagelabels}
6747 \</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`

```

6748 \< *pdftex>
6749 \pdf@ifdraftmode{%
6750 \let\Hy@PutCatalog\ltx@gobble
6751 }{%
6752 \let\Hy@PutCatalog\pdfcatalog
6753 }
6754 \</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.

```

6755 \< *vtex>
6756 \providecommand*\XR@ext}{pdf}
6757 \edef\Hy@VTeXversion{%
6758 \ifx\VTeXversion\@undefined
6759 \z@
6760 \else
6761 \ifx\VTeXversion\relax
6762 \z@
6763 \else
6764 \VTeXversion
6765 \fi
6766 \fi
6767 }
6768 \begingroup
6769 \ifnum\Hy@VTeXversion<660 %
6770 \gdef\Hy@PutCatalog#1{%
6771 \Hy@WarningNoLine{%
6772 VTeX 6.59g or above required for pdfpagelabels%
6773 }%
6774 }%
6775 \else
6776 \gdef\Hy@PutCatalog#1{%
6777 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6778 }%
6779 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6780 \ifx\#2\%
6781 \else
6782 \immediate\special{!pdfpagelabels #2}%

```

```

6783   \fi
6784   }%
6785   \fi
6786 \endgroup
6787 </vtex>

6788 <*pdftex | vtex>

```

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

```

6789 \ifHy@pdfpagelabels
6790   \def\HyPL@StorePageLabel#1{%
6791     \toks@{\expandafter{\HyPL@Labels}}%
6792     \xdef\HyPL@Labels{%
6793       \the\toks@
6794       \the\Hy@abspage<<#1>>%
6795     }%
6796   }%

```

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.

```

6797 \RequirePackage{atveryend}[2009/12/07]%
6798 \AtVeryEndDocument{%
6799   \HyPL@SetPageLabels
6800 }%

6801 \fi
6802 </pdftex | vtex>

```

28.1.2 xetex

```

6803 <*xetex>
6804 \HyPsd@LoadUnicode
6805 \Hy@unicodetrue
6806 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6807 \else
6808   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6809 \fi
6810 \HyPsd@LoadStringEncoding
6811 \define@key{Hyp}{unicode}[true]{%
6812   \Hy@boolkey{unicode}{#1}%
6813   \ifHy@unicode
6814     \else
6815       \Hy@Warning{%
6816         XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6817         option setting `unicode=false'%
6818       }%
6819   \Hy@unicodetrue
6820 \fi
6821 }
6822 \define@key{Hyp}{pdfencoding}{%
6823   \edef\HyPsd@temp{#1}%
6824   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6825     \let\HyPsd@pdfencoding\HyPsd@temp
6826   \else

```



```

6827 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6828 \let\HyPsd@pdfencoding\HyPsd@temp
6829 \else
6830 \Hy@Warning{%
6831 XeTeX driver only supports\MessageBreak
6832 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6833 setting `pdfencoding=\HyPsd@temp'%
6834 }%
6835 \fi
6836 \fi
6837 }
6838 \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:

```

6839 \def\setpdfinkmargin#1{%
6840 \begingroup
6841 \setlength{\dimen@}{#1}%
6842 \special{dvipdfmx:config g \strip@pt\dimen@}%
6843 \endgroup}
6844 \xetex

```

set the pdf version

```

6845 \<dvipdfm|xetex>
6846 \special{pdf:majorversion \Hy@pdf@majorversion}
6847 \special{pdf:minorversion \Hy@pdf@minorversion}
6848 \</dvipdfm|xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6849 \<*pdfmarkbase>
6850 \begingroup
6851 \ifundefined{headerps@out}{-}{-}%
6852 \toks@{\expandafter{\Hy@FirstPageHook}}%
6853 \xdef\Hy@FirstPageHook{%
6854 \noexpand\headerps@out{%
6855 systemdict /pdfmark known%
6856 {%
6857 userdict /?pdfmark systemdict /exec get put%
6858 }{%
6859 userdict /?pdfmark systemdict /pop get put %
6860 userdict /pdfmark systemdict /cleartomark get put%
6861 }%
6862 ifelse%
6863 }%
6864 \the\toks@
6865 }%
6866 }%
6867 \endgroup
6868 \</pdfmarkbase>

```

\Hy@PutCatalog

```

6869 \<dvipdfm|xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6870 \<*pdfmarkbase>
6871 \def\Hy@PutCatalog#1{%
6872 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%

```

```

6873 }
6874 </pdfmarkbase>

6875 <*pdfmarkbase | dvipdfm | xetex>
6876 \ifHy@pdfpagelabels

```

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

```

6877 \def\HyPL@StorePageLabel#1{%
6878   \if@filesw
6879     \begingroup
6880     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6881     \immediate\write\@mainaux{%
6882       \string\HyPL@Entry{\Hy@tempa}%
6883     }%
6884   \endgroup
6885 \fi
6886 }%

```

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.

```

6887 \Hy@AtBeginDocument{%
6888   \if@filesw
6889     \immediate\write\@mainaux{%
6890       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6891     }%
6892   \fi
6893   \ifx\HyPL@Labels\@empty
6894     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6895   \else
6896     \HyPL@SetPageLabels
6897   \fi
6898   \let\HyPL@Entry\@gobble
6899 }%

```

`\HyPL@Entry`

```

6900 \def\HyPL@Entry#1{%
6901   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6902     \HyPL@Labels
6903     #1%
6904   }%
6905 }%

6906 \fi
6907 </pdfmarkbase | dvipdfm | xetex>

6908 <*package>

6909 \ifx\MaybeStopEarly\relax
6910 \else
6911   \Hy@stoppeardearlytrue
6912   \expandafter\MaybeStopEarly
6913 \fi
6914 \Hy@stoppeardearlyfalse

```

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

```

6915 \def\Hy@CounterExists#1{%
6916   \begingroup\expandafter\expandafter\expandafter\endgroup
6917   \expandafter\ifx\csname c@#1\endcsname\relax
6918     \expandafter\@gobble
6919   \else
6920     \begingroup\expandafter\expandafter\expandafter\endgroup
6921     \expandafter\ifx\csname the#1\endcsname\relax
6922       \expandafter\expandafter\expandafter\@gobble
6923     \else
6924       \expandafter\expandafter\expandafter\@firstofone
6925     \fi
6926   \fi
6927 }
6928 \Hy@CounterExists{section}{%
6929   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6930 }
6931 \Hy@CounterExists{part}{%
6932   \providecommand\theHpart{\arabic{part}}}%
6933 }
6934 \ltx@ifundefined{thechapter}{%
6935   \providecommand\theHsection   {\arabic{section}}}%
6936   \providecommand\theHfigure    {\arabic{figure}}}%
6937   \providecommand\theHtable     {\arabic{table}}}%
6938 }{%
6939   \providecommand\theHchapter   {\arabic{chapter}}}%
6940   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6941   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6942   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6943 }
6944 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6945 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6946 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
```

```

6947 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6948 \providecommand\theHtheorem      {\theHsection.\arabic{theorem}}
6949 \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.

```

6950 \let\H@item\item
6951 \newcounter{Item}
6952 \def\theHItem{\arabic{Item}}
6953 \def\item{%
6954   \@hyper@itemfalse
6955   \if@nmbrlist\@hyper@itemtrue\fi
6956   \H@item
6957 }

6958 \providecommand\theHenumi   {\theHItem}
6959 \providecommand\theHenumii  {\theHItem}
6960 \providecommand\theHenumiii {\theHItem}
6961 \providecommand\theHenumiv  {\theHItem}
6962 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6963 \providecommand\theHmpfootnote {\arabic{mpfootnote}}
6964 \@ifundefined{theHHmpfootnote}{%
6965   \let\theHHmpfootnote\theHHfootnote
6966 }{}

```

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.

```

6967 \let\H@refstepcounter\refstepcounter
6968 \edef\name@of@eq{equation}%
6969 \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.

```

6970 \newif\if@hyper@item
6971 \newif\if@skiphyperref
6972 \@hyper@itemfalse
6973 \@skiphyperreffalse
6974 \def\refstepcounter#1{%
6975   \ifHy@pdfstring
6976   \else
6977     \H@refstepcounter{#1}%
6978     \edef\This@name{#1}%
6979     \ifx\This@name\name@of@slide
6980     \else
6981       \if@skiphyperref
6982       \else
6983         \if@hyper@item
6984           \stepcounter{Item}%
6985           \hyper@refstepcounter{Item}%
6986         \@hyper@itemfalse
6987       \else
6988         \hyper@refstepcounter{#1}%

```

```

6989 \fi
6990 \fi
6991 \fi
6992 \fi
6993 }
6994 \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.

```

6995 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6996 \def\hyper@refstepcounter#1{%
6997 \edef\This@name{#1}%
6998 \ifx\This@name\name@of@eq
6999 \ifundefined{theHequation}{%
7000 \make@stripped@name{\theequation}%
7001 \let\theHequation\newname
7002 }}%
7003 \fi
7004 \HyCnt@ProvideTheHCounter{#1}%
7005 \hyper@makecurrent{#1}%
7006 \ifmeasuring@
7007 \else
7008 \Hy@raisedlink{%
7009 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7010 }%
7011 \fi
7012 }

```

`\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.

```

7013 \def\HyCnt@ProvideTheHCounter#1{%
7014 \ifundefined{theH#1}{%
7015 \expandafter\def\csname theH#1\endcsname{}%
7016 \def\Hy@temp{\@elt{#1}}%
7017 \ltx@onelevel@sanitize\Hy@temp
7018 \let\HyOrg@elt\@elt
7019 \edef\@elt{%
7020 \noexpand\HyCnt@LookForParentCounter
7021 \expandafter\noexpand\csname theH#1\endcsname
7022 }%
7023 \cl@@ckpt
7024 \let\@elt\HyOrg@elt
7025 \expandafter
7026 \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7027 \expandafter{%
7028 \expandafter\@arabic\csname c@#1\endcsname

```

```

7029 }%
7030 }{}%
7031 }

```

\Hy@LookForParentCounter

```

7032 \def\HyCnt@LookForParentCounter#1#2{%
7033   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7034   \ltx@ifundefined{cl@#2}{%
7035     }{%
7036     \ltx@onelevel@sanitize\Hy@temp@A
7037     \edef\Hy@temp@A{%
7038       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7039     }\Hy@temp@A
7040     \ifin@
7041     \ltx@ifundefined{theH#2}{%
7042       \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7043       \expandafter{%
7044         \expandafter\@arabic\csname c@#2\endcsname.%
7045       }%
7046     }{%
7047       \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7048       \expandafter{%
7049         \csname theH#2\endcsname.%
7050       }%
7051     }%
7052   \fi
7053 }%
7054 }

```

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`.

```

7055 \begingroup\expandafter\expandafter\expandafter\endgroup
7056 \expandafter\ifx\csname chapter\endcsname\relax
7057   \def\Hy@chapterstring{section}%
7058 \else
7059   \def\Hy@chapterstring{chapter}%
7060 \fi
7061 \def\Hy@appendixstring{appendix}
7062 \def\Hy@chapapp{\Hy@chapterstring}
7063 \ltx@ifundefined{appendix}{%
7064 }{%
7065   \let\HyOrg@appendix\appendix
7066   \def\Hy@AlphNoErr#1{%
7067     \ifnum\value{#1}>26 %
7068       Alph\number\value{#1}%
7069     \else
7070       \ifnum\value{#1}<1 %
7071         Alph\number\value{#1}%
7072       \else
7073         \Alph{#1}%

```

```

7074   \fi
7075   \fi
7076 }%
7077 \def\appendix{%
7078   \ltx@ifundefined{chapter}{%
7079     \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7080   }{%
7081     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7082   }%
7083   \xdef\Hy@chapapp{\Hy@appendixstring}%
7084   \HyOrg@appendix
7085 }%
7086 }

```

\Hy@Test@Alph

```

7087 \def\Hy@Test@alph#1{%
7088   \ifcase#1\or
7089     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7090     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7091     u\or v\or w\or x\or y\or z%
7092   \else
7093     \@ctrerr
7094   \fi
7095 }

```

\Hy@Test@Alph

```

7096 \def\Hy@Test@Alph#1{%
7097   \ifcase#1\or
7098     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7099     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7100     U\or V\or W\or X\or Y\or Z%
7101   \else
7102     \@ctrerr
7103   \fi
7104 }

```

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

```

7105 \def\hyper@makecurrent#1{%
7106   \begingroup
7107   \Hy@safe@activestru
7108   \edef\Hy@param{#1}%
7109   \ifx\Hy@param\Hy@chapterstring
7110     \let\Hy@param\Hy@chapapp
7111   \fi
7112   \ifHy@hypertextnames
7113     \let\@number\@firstofone
7114     \def\@fnsymbol##1{fnsymbol\number##1}%
7115     \def\@arabic##1{\number##1}%
7116     \ifx\@alph\Hy@Test@alph
7117     \else
7118       \def\@alph{alph\number}%
7119     \fi
7120     \ifx\@Alph\Hy@Test@Alph

```

```

7121 \else
7122 \def\@Alph{Alph\number}%
7123 \fi
7124 \ifHy@naturalnames
7125 \let\textlatin\@firstofone
7126 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7127 \else
7128 \xdef\HyperGlobalCurrentHref{%
7129 \csname
7130 the%
7131 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7132 #1%
7133 \endcsname
7134 }%
7135 \fi
7136 \xdef\HyperGlobalCurrentHref{%
7137 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7138 }%
7139 \else
7140 \Hy@GlobalStepCount\Hy@linkcounter
7141 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7142 \fi
7143 \endgroup
7144 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7145 \ifHy@localanchorname
7146 \let\@currentHref\HyperLocalCurrentHref
7147 \else
7148 \global\let\@currentHref\HyperGlobalCurrentHref
7149 \fi
7150 }

```

\Hy@MakeCurrentHref

```

7151 \def\Hy@MakeCurrentHref#1{%
7152 \edef\HyperLocalCurrentHref{#1}%
7153 \@onelevel@sanitize\HyperLocalCurrentHref
7154 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7155 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7156 \ifHy@localanchorname
7157 \let\@currentHref\HyperLocalCurrentHref
7158 \else
7159 \global\let\@currentHref\HyperGlobalCurrentHref
7160 \fi
7161 }

```

\Hy@MakeCurrentHrefAuto

```

7162 \def\Hy@MakeCurrentHrefAuto#1{%
7163 \Hy@GlobalStepCount\Hy@linkcounter
7164 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7165 }

```

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

```

7166 \def\@currentHlabel{\@currentHref}

```


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`

```

7167 \Hy@AtBeginDocument{%
7168   \@ifclassloaded{revtex4}{%
7169     \@namedef{ver@lastpage.sty}{1994/06/25}%
7170   }{}%
7171   \@ifpackageloaded{lastpage}{%
7172     \ifHy@pageanchor
7173     \else
7174       \Hy@WarningNoLine{%
7175         The \string\pageref{LastPage} link doesn't work\MessageBreak
7176         with disabled option `pageanchor'%
7177       }%
7178     \fi
7179     \def\lastpage@putlabel{%
7180       \addtocounter{page}{-1}%
7181       \if@filesw
7182         \begingroup
7183           \let\@number\@firstofone
7184           \ifHy@pageanchor
7185             \ifHy@hypertextnames
7186               \ifHy@plainpages
7187                 \def\Hy@temp{\arabic{page}}%
7188               \else
7189                 \Hy@unicodedefalse
7190                 \pdfstringdef\Hy@temp{\thepage}%
7191               \fi
7192             \else
7193               \def\Hy@temp{\the\Hy@pagecounter}%
7194             \fi
7195           \fi
7196           \immediate\write\@auxout{%
7197             \string\newlabel
7198             {LastPage}{}{\thepage}{}{%
7199               \ifHy@pageanchor page.\Hy@temp\fi}{}%
7200           }%
7201         \endgroup
7202       \fi
7203       \addtocounter{page}{1}%
7204     }%
7205     \@ifclassloaded{revtex4}{%
7206       \begingroup
7207         \toks@\expandafter{\lastpage@putlabel}%
7208         \edef\x{\endgroup
7209           \def\noexpand\lastpage@putlabel{%

```

```

7210      \noexpand\stepcounter{page}%
7211      \the\toks@
7212      \noexpand\addtocounter{page}\noexpand\m@ne
7213    }%
7214  }%
7215  \x
7216  {}}%
7217  {}}%
7218 }
7219 \</package>
7220 \<*check>
7221 \checkpackage{lastpage}[1994/06/25]
7222 \checkcommand\def\lastpage@putlabel{%
7223   \addtocounter{page}{-1}%
7224   \immediate\write\@auxout{%
7225     \string\newlabel{LastPage}{{}\{thepage}}}%
7226   }%
7227   \addtocounter{page}{1}%
7228 }
7229 \</check>
7230 \<*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.

```

7231 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7232 \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:

```

7233 \@ifpackageloaded{titlesec}{%
7234   \def\ttl@Hy@steplink#1{%
7235     \Hy@MakeCurrentHrefAuto{#1*}%
7236     \edef\ttl@Hy@saveanchor{%
7237       \noexpand\Hy@raisedlink{%
7238         \noexpand\hyper@anchorstart{\@currentHref}%
7239         \noexpand\hyper@anchorend
7240         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7241         \noexpand\ttl@Hy@PatchSaveWrite
7242       }%
7243     }%
7244   }%
7245   \def\ttl@Hy@PatchSaveWrite{%
7246     \begingroup
7247     \toks@\expandafter{\ttl@savewrite}%
7248     \edef\x{\endgroup
7249       \def\noexpand\ttl@savewrite{%

```

```

7250      \let\noexpand\@currentHref
7251      \noexpand\ttl@Hy@SavedCurrentHref
7252      \the\toks@
7253    }%
7254  }%
7255  \x
7256 }%
7257 \def\ttl@Hy@refstepcounter#1{%
7258   \let\ttl@b\Hy@raisedlink
7259   \def\Hy@raisedlink##1{%
7260     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7261   }%
7262   \refstepcounter{#1}%
7263   \let\Hy@raisedlink\ttl@b
7264 }%
7265 }{}

Package titletoc support:
7266 \@ifpackageloaded{titletoc}{%
7267   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7268 }{}

```

33 Package varioref support

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

```

7269 \AtBeginDocument{%
7270   \def\Hy@varioref@undefined{{??}{??}{}}{}
7271   \@ifpackageloaded{varioref}{%
7272     \def\vref@pagenum#1#2{%
7273       \@ifundefined{r@#2}{%
7274         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7275       }{}%
7276       \edef#1{\getpagerefnumber{#2}}%
7277     }%
7278 }{}

```

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

```

7279 \def\Hy@varioref@refstepcounter#1{%
7280   \stepcounter{#1}%
7281   \protected@edef\@currentlabel{%
7282     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7283   }%
7284 }
7285 \ifx\refstepcounter\Hy@varioref@refstepcounter
7286   \let\H@refstepcounter\refstepcounter
7287   \let\refstepcounter\Hy@saved@refstepcounter
7288 \fi
7289 }

```

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

```

7290 \ifpackageloaded{longtable}{%
7291   \begingroup
7292   \def\y{\LT@array}%
7293   \@ifundefined{scr@LT@array}{%
7294     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7295     }\def\y{\scr@LT@array}}%
7296   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7297     \expandafter\endgroup
7298     \expandafter\def\y[##1]##2{%
7299       \H@refstepcounter{##1}%
7300       \hyper@makecurrent{table}%
7301       \let\Hy@LT@currentHref\@currentHref
7302       #2\@sharp###3#4%
7303     }%
7304   }%
7305   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7306 \begingroup
7307 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7308   \endgroup
7309   \def\LT@start{%
7310     #1%
7311     \ifvoid\LT@foot#2\fi
7312     \let\@currentHref\Hy@LT@currentHref
7313     \Hy@raisedlink{%
7314       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7315     }%
7316     #3%
7317   }%
7318 }%
7319 \expandafter\x\LT@start\@nil
7320 }{}

```

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.

```

7321 \let\new@refstepcounter\refstepcounter
7322 \let\H@equation\equation
7323 \let\H@endequation\endequation
7324 \@ifpackageloaded{amsmath}{%

```

```

7325 \long\def\Hy@temp{%
7326   \incr@eqnum
7327   \mathdisplay@push
7328   \st@rredfalse \global\@eqnswtrue
7329   \mathdisplay{equation}%
7330 }%
7331 \ifx\Hy@temp\equation
7332   \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7333     \csname iftrue\endcsname
7334   \else
7335     \long\def\equation{%
7336       \mathdisplay@push
7337       \st@rredfalse \global\@eqnswtrue
7338       \mathdisplay{equation}%
7339       \incr@eqnum
7340     }%
7341   \fi
7342 \fi
7343 }{%
7344 \def\equation{%
7345   \let\refstepcounter\H@refstepcounter
7346   \H@equation
7347   \@ifundefined{theHequation}{%
7348     \make@stripped@name{\theequation}%
7349     \let\theHequation\newname
7350   }{%
7351     \hyper@makecurrent{equation}%

```

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

```

7352 \mathopen{%
7353   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7354 }%
7355 \let\refstepcounter\new@refstepcounter
7356 }%
7357 \def\endequation{%
7358   \ifx\Hy@raisedlink\ltx@empty
7359     \hyper@anchorend
7360   \else
7361     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7362   \fi
7363   \H@endequation
7364 }%
7365 }

```

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.

```

7366 \newif\if@eqnstar
7367 \@eqnstarfalse
7368 \let\H@eqnarray\eqnarray
7369 \let\H@endeqnarray\endeqnarray
7370 \def\eqnarray{%

```

```

7371 \let\Hy@reserved@a\relax
7372 \def\@currentHref{}\%
7373 \H@eqnarray
7374 \if@eqnstar
7375 \else
7376 \ifx\\\@currentHref\%
7377 \else
7378 \@ifundefined{theHequation}{\%
7379 \make@stripped@name{\theequation}%
7380 \let\theHequation\newname
7381 }{\}%
7382 \hyper@makecurrent{equation}%
7383 \mathopen{\%
7384 \Hy@raisedlink{\%
7385 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7386 }%
7387 }%
7388 \fi
7389 \fi
7390 }
7391 \def\endeqnarray{\%
7392 \H@endeqnarray
7393 }

```

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.

```

7394 \@namedef{eqnarray*}{\%
7395 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7396 }
7397 \@namedef{endeqnarray*}{\%
7398 \nonumber\endeqnarray\@eqnstarfalse
7399 }

```

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

```

7400 \ltx@ifundefined{subeqnarray}{\}%
7401 \let\H@subeqnarray\subeqnarray
7402 \let\H@endsubeqnarray\endsubeqnarray
7403 \def\subeqnarray{\%
7404 \let\Hy@reserved@a\relax
7405 \H@subeqnarray
7406 \@ifundefined{theHequation}{\%
7407 \make@stripped@name{\theequation}%
7408 \let\theHequation\newname
7409 }{\}%
7410 \hyper@makecurrent{equation}%
7411 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7412 }%
7413 \def\endsubeqnarray{\%
7414 \H@endsubeqnarray
7415 }%
7416 \providecommand\theHsubequation{\theHequation\alph{subequation}}\%
7417 }

```

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

```

7418 \def\make@stripped@name#1{%
7419   \begingroup
7420   \escapechar\m@ne
7421   \global\let\newname\@empty
7422   \protected@edef\Hy@tempa{#1}%
7423   \edef\@tempb{%
7424     \noexpand\@tfor\noexpand\Hy@tempa:=%
7425     \expandafter\strip@prefix\meaning\Hy@tempa
7426   }%
7427   \@tempb\do{%
7428     \if{\Hy@tempa\else
7429     \if}\Hy@tempa\else
7430     \xdef\newname{\newname\Hy@tempa}%
7431     \fi
7432     \fi
7433   }%
7434   \endgroup
7435 }
```

Support for amsmath's subequations:

```

7436 \begingroup\expandafter\expandafter\expandafter\endgroup
7437 \expandafter\ifx\csname subequations\endcsname\relax
7438 \else
7439   \let\HyOrg@subequations\subequations
7440   \def\subequations{%
7441     \stepcounter{equation}%
7442     \protected@edef\theHparentequation{%
7443       \@ifundefined{theHequation}\theequation\theHequation
7444     }%
7445     \addtocounter{equation}{-1}%
7446     \HyOrg@subequations
7447     \def\theHequation{\theHparentequation\alph{equation}}%
7448     \ignorespaces
7449   }%
7450   \fi
```

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

```

7451 \Hy@AtBeginDocument{%
7452   \@ifpackageloaded{cleveref}{%
7453     \let\Hy@savethm\@thm
7454     \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7455   }{%
7456     \@ifpackageloaded{amsthm}{%

```

Class `amsbook` uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps

7457 \def\Hy@temp#1#2#3{%
7458   \ifhmode\unskip\unskip\par\fi
7459   \normalfont
7460   \trivlist

```

```

7461 \let\thmheadnl\relax
7462 \let\thm@swap\@gobble
7463 \let\thm@indent\indent % indent
7464 \thm@headfont{\scshape}% heading font small caps
7465 \thm@notefont{\fontseries\mddefault\upshape}%
7466 \thm@headpunct{.}% add period after heading
7467 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7468 \thm@space@setup
7469 #1% style overrides
7470 \@topsep \thm@preskip % used by thm head
7471 \@topsepadd \thm@postskip % used by \@endparenv
7472 \def\@tempa{#2}\ifx\@empty\@tempa
7473 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7474 \else
7475 \refstepcounter{#2}%
7476 \def\@tempa{%
7477 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7478 }%
7479 \fi
7480 \@tempa
7481 }%
7482 \ifx\Hy@temp\@thm
7483 \def\@thm#1#2#3{%
7484 \ifhmode
7485 \unskip\unskip\par
7486 \fi
7487 \normalfont
7488 \trivlist
7489 \let\thmheadnl\relax
7490 \let\thm@swap\@gobble
7491 \let\thm@indent\indent % indent
7492 \thm@headfont{\scshape}% heading font small caps
7493 \thm@notefont{\fontseries\mddefault\upshape}%
7494 \thm@headpunct{.}% add period after heading
7495 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7496 \thm@space@setup
7497 #1% style overrides
7498 \@topsep \thm@preskip % used by thm head
7499 \@topsepadd \thm@postskip % used by \@endparenv
7500 \def\dth@counter{#2}%
7501 \ifx\@empty\dth@counter
7502 \def\@tempa{%
7503 \@oparg{\@begintheorem{#3}{}}}%
7504 }%
7505 \else
7506 \H@refstepcounter{#2}%
7507 \hyper@makecurrent{#2}%
7508 \let\Hy@dth@currentHref\@currentHref
7509 \def\@tempa{%
7510 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7511 }%
7512 \fi
7513 \@tempa
7514 }%

```



```

7515 \else
7516 \def\@thm#1#2#3{%
7517 \ifhmode
7518 \unskip\unskip\par
7519 \fi
7520 \normalfont
7521 \trivlist
7522 \let\thmheadnl\relax
7523 \let\thm@swap\@gobble
7524 \thm@notefont{\fontseries\mddefault\upshape}%
7525 \thm@headpunct{.}% add period after heading
7526 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7527 \thm@space@setup
7528 #1% style overrides
7529 \@topsep \thm@preskip % used by thm head
7530 \@topsepadd \thm@postskip % used by \@endparenv
7531 \def\dth@counter{#2}%
7532 \ifx\@empty\dth@counter
7533 \def\@tempa{%
7534 \@oparg{\@begintheorem{#3}{}}[]%
7535 }%
7536 \else
7537 \H@refstepcounter{#2}%
7538 \hyper@makecurrent{#2}%
7539 \let\Hy@dth@currentHref\@currentHref
7540 \def\@tempa{%
7541 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7542 }%
7543 \fi
7544 \@tempa
7545 }%
7546 \fi
7547 \dth@everypar={%
7548 \@minipagefalse
7549 \global\@newlistfalse
7550 \@noparitemfalse
7551 \if@inlabel
7552 \global\@inlabelfalse
7553 \begingroup
7554 \setbox\z@\lastbox
7555 \ifvoid\z@
7556 \kern-\itemindent
7557 \fi
7558 \endgroup
7559 \ifx\@empty\dth@counter
7560 \else
7561 \Hy@raisedlink{%
7562 \hyper@anchorstart{%
7563 \ltx@ifundefined{Hy@dth@currentHref}%
7564 \@currentHref\Hy@dth@currentHref
7565 }\hyper@anchorend
7566 }%
7567 \fi
7568 \unhbox\@labels

```

```

7569 \fi
7570 \if@nobreak
7571 \@nobreakfalse \clubpenalty\@M
7572 \else
7573 \clubpenalty\@clubpenalty \everypar{}%
7574 \fi
7575 }%
7576 }%

```

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

```

7577 {%
7578 \let\Hy@savedthm\@thm
7579 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7580 }%
7581 }%
7582 }

```

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.

```

7583 \ifHy@hyperfootnotes
7584 \newcounter{Hfootnote}%
7585 \let\H@@footnotetext\@footnotetext
7586 \let\H@@footnotemark\@footnotemark
7587 \def\@xfootnotenext[#1]{%
7588 \begingroup
7589 \csname c@\@mpfn\endcsname #1\relax
7590 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7591 \endgroup
7592 \ifx\@footnotetext\@mpfootnotetext
7593 \expandafter\H@@mpfootnotetext
7594 \else
7595 \expandafter\H@@footnotetext
7596 \fi
7597 }%
7598 \def\@xfootnotemark[#1]{%
7599 \begingroup
7600 \c@footnote #1\relax
7601 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7602 \endgroup
7603 \H@@footnotemark
7604 }%
7605 \let\H@@mpfootnotetext\@mpfootnotetext
7606 \long\def\@mpfootnotetext#1{%
7607 \H@@mpfootnotetext{%
7608 \ifHy@nesting
7609 \expandafter\ltx@firstoftwo
7610 \else
7611 \expandafter\ltx@secondoftwo

```

```

7612 \fi
7613 {%
7614 \expandafter\hyper@@anchor\expandafter{%
7615 \Hy@footnote@currentHref
7616 }{\ignorespaces #1}%
7617 }{%
7618 \Hy@raisedlink{%
7619 \expandafter\hyper@@anchor\expandafter{%
7620 \Hy@footnote@currentHref
7621 }{\relax}%
7622 }\ignorespaces #1%
7623 }%
7624 }%
7625 }%
7626 \long\def\@footnotetext#1{%
7627 \H@@@footnotetext{%
7628 \ifHy@nesting
7629 \expandafter\ltx@firstoftwo
7630 \else
7631 \expandafter\ltx@secondoftwo
7632 \fi
7633 {%
7634 \expandafter\hyper@@anchor\expandafter{%
7635 \Hy@footnote@currentHref
7636 }{\ignorespaces #1}%
7637 }{%
7638 \Hy@raisedlink{%
7639 \expandafter\hyper@@anchor\expandafter{%
7640 \Hy@footnote@currentHref
7641 }{\relax}%
7642 }%
7643 \let\@currentHref\Hy@footnote@currentHref
7644 \let\@currentlabelname\@empty
7645 \ignorespaces #1%
7646 }%
7647 }%
7648 }%

```

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.

```

7649 \def\@footnotemark{%
7650 \leavevmode
7651 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7652 \stepcounter{Hfootnote}%
7653 \global\let\Hy@saved@currentHref\@currentHref
7654 \hyper@makecurrent{Hfootnote}%
7655 \global\let\Hy@footnote@currentHref\@currentHref
7656 \global\let\@currentHref\Hy@saved@currentHref
7657 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7658 \@makefnmark
7659 \hyper@linkend

```

```

7660 \ifhmode\spacefactor\@x@sf\fi
7661 \relax
7662 }%

```

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

```

7663 \@ifpackageloaded{tabularx}{%
7664 \let\HyOrg@TX@endtabularx\TX@endtabularx
7665 \def\Hy@tabularx@hook{%
7666 \let\@footnotetext\H@@footnotetext
7667 \let\@footnotemark\H@@footnotemark
7668 \let\@mpfootnotetext\H@@mpfootnotetext
7669 }%
7670 \begingroup
7671 \toks@\expandafter{\TX@endtabularx}%
7672 \xdef\Hy@gtemp{%
7673 \noexpand\Hy@tabularx@hook
7674 \the\toks@
7675 }%
7676 \endgroup
7677 \let\TX@endtabularx\Hy@gtemp
7678 }{}%

```

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

```

7679 \@ifpackageloaded{longtable}{%
7680 \CheckCommand*{\LT@p@ftntext}[1]{%
7681 \edef\@tempa{%
7682 \the\LT@p@ftn
7683 \noexpand\footnotetext[\the\c@footnote]%
7684 }%
7685 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7686 }%
7687 \long\def\LT@p@ftntext#1{%
7688 \edef\@tempa{%
7689 \the\LT@p@ftn
7690 \begingroup
7691 \noexpand\c@footnote=\the\c@footnote\relax
7692 \noexpand\protected@xdef\noexpand\@thefnmark{%
7693 \noexpand\thempfn
7694 }%
7695 \noexpand\Hy@LT@footnotetext{%
7696 \Hy@footnote@currentHref
7697 }%
7698 }%
7699 \global\LT@p@ftn\expandafter{%
7700 \@tempa{#1}%
7701 \endgroup
7702 }%
7703 }%
7704 \long\def\Hy@LT@footnotetext#1#2{%
7705 \H@@@footnotetext{%
7706 \ifHy@nesting

```

```

7707     \hyper@@anchor{#1}{#2}%
7708     \else
7709     \Hy@raisedlink{%
7710     \hyper@@anchor{#1}{\relax}%
7711     }%
7712     \def\@currentHref{#1}%
7713     \let\@currentlabelname\@empty
7714     #2%
7715     \fi
7716   }%
7717 }%
7718 }{}%

```

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

```

7719 \ifpackageloaded{fancyvrb}{%
7720   \def\V@@footnotetext{%
7721     \insert\footins\bgroup
7722     \csname reset@font\endcsname
7723     \footnotesize
7724     \interlinepenalty\interfootnotelinepenalty
7725     \splittopskip\footnotesep
7726     \splitmaxdepth\dp\strutbox
7727     \floatingpenalty \@MM
7728     \hsize\columnwidth
7729     \@parboxrestore
7730     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7731     \@makefnmark{}%
7732     \rule{\z@}{\footnotesep}%
7733     \bgroup
7734     \aftergroup\V@@@footnotetext
7735     \Hy@raisedlink{%
7736       \expandafter\hyper@@anchor\expandafter{%
7737         \Hy@footnote@currentHref
7738         }{\relax}%
7739     }%
7740     \let\@currentHref\Hy@footnote@currentHref
7741     \let\@currentlabelname\@empty
7742     \ignorespaces
7743   }%
7744 }{}%

```

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

```

7745 \def\Hy@temp#1{%
7746   \begingroup
7747   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7748   \endgroup
7749   \@footnotemark
7750 }%
7751 \ifx\Hy@temp\footref
7752   \def\footref#1{%
7753     \begingroup
7754     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7755     \endgroup
7756     \H@@@footnotemark

```

```

7757 }%
7758 \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.

```

7759 \let\HyOrg@maketitle\maketitle
7760 \def\maketitle{%
7761   \let\Hy@saved@footnotemark\@footnotemark
7762   \let\Hy@saved@footnotetext\@footnotetext
7763   \let\@footnotemark\H@@footnotemark
7764   \let\@footnotetext\H@@footnotetext
7765   \@ifnextchar[\Hy@maketitle@optarg{% ]
7766     \HyOrg@maketitle
7767     \Hy@maketitle@end
7768   }%
7769 }%
7770 \def\Hy@maketitle@optarg[#1]{%
7771   \HyOrg@maketitle[#1]}%
7772   \Hy@maketitle@end
7773 }%
7774 \def\Hy@maketitle@end{%
7775   \ifx\@footnotemark\H@@footnotemark
7776     \let\@footnotemark\Hy@saved@footnotemark
7777     \fi
7778   \ifx\@footnotetext\H@@footnotetext
7779     \let\@footnotetext\Hy@saved@footnotetext
7780     \fi
7781   }%

```

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

```

7782 \def\realfootnote{%
7783   \@ifnextchar[\@xfootnote{%
7784     \stepcounter{\@mpfn}%
7785     \protected@xdef\@thefnmark{\thempfn}%
7786     \H@@footnotemark\H@@footnotetext
7787   }%
7788 }%

7789 \fi
7790 \Hy@DisableOption{hyperfootnotes}

7791 \</package>
7792 \< *check>
7793 \checklatex
7794 \checkcommand\def\@xfootnotenext[#1]{%
7795   \begingroup
7796     \csname c@\@mpfn\endcsname #1\relax
7797     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7798   \endgroup
7799   \@footnotetext
7800 }
7801 \checkcommand\def\@xfootnotemark[#1]{%
7802   \begingroup
7803     \c@footnote #1\relax

```

```

7804 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7805 \endgroup
7806 \@footnotemark
7807 }
7808 \checkcommand\def\@footnotemark{%
7809 \leavevmode
7810 \ifhmode\edef\@xsf{\the\spacefactor}\nobreak\fi
7811 \@makefnmark
7812 \ifhmode\spacefactor\@xsf\fi
7813 \relax
7814 }
7815 \</check>
7816 \<*\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.

```

7817 \def\caption{%
7818 \ifx\@captive\@undefined
7819 \latex@error{\noexpand\caption outside float}\@ehd
7820 \expandafter\@gobble
7821 \else
7822 \H@refstepcounter\@captive
7823 \let\Hy@tempa\@caption
7824 \@ifundefined{float@caption}{%
7825 }{%
7826 \expandafter\ifx\csname @float@c@\@captive\endcsname
7827 \float@caption
7828 \let\Hy@tempa\Hy@float@caption
7829 \fi
7830 }%
7831 \expandafter\@firstofone
7832 \fi
7833 {\@dblarg{\Hy@tempa\@captive}}%
7834 }
7835 \long\def\@caption#1[#2]#3{%
7836 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7837 \csname iftrue\endcsname
7838 \global\let\@currentHref\hc@currentHref
7839 \else
7840 \hyper@makecurrent{\@captive}%
7841 \fi
7842 \@ifundefined{NR@gettitle}{%
7843 \def\@currentlabelname{#2}%
7844 }{%
7845 \NR@gettitle{#2}%
7846 }%
7847 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7848 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7849 }%
7850 \begingroup
7851 \@parboxrestore

```

```

7852 \if@minipage
7853 \setminipage
7854 \fi
7855 \normalsize
7856 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7857 \csname iftrue\endcsname
7858 \global\@capstartfalse
7859 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7860 \else
7861 \@makecaption{\csname fnum@#1\endcsname}{%
7862 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7863 \ifHy@nesting
7864 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7865 \else
7866 \Hy@raisedlink{%
7867 \expandafter\hyper@@anchor\expandafter{%
7868 \@currentHref
7869 }{\relax}%
7870 }%
7871 #3%
7872 \fi
7873 }%
7874 \fi
7875 \par
7876 \endgroup
7877 }

```

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’.

```

7878 \let\Hy@float@caption\@caption
7879 \newcommand{\HyNew@float@makebox}[1]{%
7880 \HyOrg@float@makebox{%
7881 #1\relax
7882 \ifx\Hy@float@currentHref\@undefined
7883 \else
7884 \expandafter\hyper@@anchor\expandafter{%
7885 \Hy@float@currentHref
7886 }{\relax}%
7887 \global\let\Hy@float@currentHref\@undefined
7888 \fi
7889 }%
7890 }%
7891 \@ifpackageloaded{float}{%
7892 \def\Hy@float@caption{%
7893 \ifx\Hy@float@currentHref\@undefined
7894 \hyper@makecurrent{\@cuptype}%
7895 \global\let\Hy@float@currentHref\@currentHref
7896 \else
7897 \let\@currentHref\Hy@float@currentHref
7898 \fi

```



```

7899 \float@caption
7900 }%
7901 \let\HyOrg@float@makebox\float@makebox
7902 \let\float@makebox\HyNew@float@makebox
7903 }{}

7904 \</package>
7905 \< *check>
7906 \checklatex[1999/06/01 - 2000/06/01]
7907 \checkcommand\def\caption{%
7908 \ifx\@captive\@undefined
7909 \< @latex@error{\noexpand\caption outside float}\@ehd
7910 \expandafter\@gobble
7911 \else
7912 \refstepcounter\@captive
7913 \expandafter\@firstofone
7914 \fi
7915 {\@dblarg{\@caption\@captive}}}%
7916 }
7917 \checkcommand\long\def\@caption#1[#2]#3{%
7918 \par
7919 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7920 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7921 }%
7922 \begingroup
7923 \@parboxrestore
7924 \if@minipage
7925 \setminipage
7926 \fi
7927 \normalsize
7928 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7929 \endgroup
7930 }
7931 \< /check>
7932 \< *package>

```

38 Bibliographic references

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

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

```

7933 \def\hyper@natlinkstart#1{%
7934 \Hy@backout{#1}%
7935 \hyper@linkstart{cite}{cite.#1}%
7936 \def\hyper@nat@current{#1}%
7937 }
7938 \def\hyper@natlinkend{%
7939 \hyper@linkend

```

```

7940 }
7941 \def\hyper@natlinkbreak#1#2{%
7942   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7943 }
7944 \def\hyper@natanchorstart#1{%
7945   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7946 }
7947 \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.

```

7948 \ltx@ifundefined{NAT@parse}{%
7949   \providecommand*\@extra@binfo{%
7950     \providecommand*\@extra@b@citeb}%
7951   \def\bibcite#1#2{%
7952     \@newl@bel{b}{#1\@extra@binfo}{%
7953       \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7954     }%
7955   }%
7956   \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.”.

```

7957   \let\Hy@bibcite\bibcite
7958   \begingroup
7959     \ifundefined{bbl@cite@choice}{}%
7960     \g@addto@macro\bbl@cite@choice{%
7961       \let\bibcite\Hy@bibcite
7962     }%
7963   }%
7964   \endgroup

```

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

```

7965   \providecommand*\@BIBLABEL{\@biblabel}%
7966   \def\@bibitem[#1]#2{%
7967     \@skiphyperrtrue
7968     \H@item[%
7969       \ifx\Hy@raisedlink\@empty
7970         \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7971         \@BIBLABEL{#1}%
7972         \hyper@anchorend
7973       \else
7974         \Hy@raisedlink{%
7975           \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7976         }%
7977       \@BIBLABEL{#1}%
7978     \fi
7979     \hfill
7980   ]%
7981   \@skiphyperrfalse
7982   \if@filesw
7983     \begingroup
7984     \let\protect\noexpand

```

```

7985     \immediate\write\@auxout{%
7986     \string\bibcite{#2}{#1}%
7987     }%
7988     \endgroup
7989     \fi
7990     \ignorespaces
7991 }%

```

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

```

7992 \def\@bibitem#1{%
7993   \@skiphyperreftrue\H@item\@skiphyperreffalse
7994   \Hy@raisedlink{%
7995     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7996   }%
7997   \if@filesw
7998     \begingroup
7999     \let\protect\noexpand
8000     \immediate\write\@auxout{%
8001       \string\bibcite{#1}{\the\value{\@listctr}}%
8002     }%
8003     \endgroup
8004     \fi
8005     \ignorespaces
8006   }%
8007 }{}

8008 \</package>
8009 \< *check>
8010 \checklatex
8011 \checkcommand\def\@bibitem[#1]#2{%
8012   \item[\@biblabel{#1}\hfill]%
8013   \if@filesw
8014     {%
8015       \let\protect\noexpand
8016       \immediate\write\@auxout{%
8017         \string\bibcite{#2}{#1}%
8018       }%
8019     }%
8020     \fi
8021     \ignorespaces
8022   }
8023 \checkcommand\def\@bibitem#1{%
8024   \item
8025   \if@filesw
8026     \immediate\write\@auxout{%
8027       \string\bibcite{#1}{\the\value{\@listctr}}%
8028     }%
8029     \fi
8030     \ignorespaces
8031   }
8032 \</check>
8033 \< *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.

```

8034 \ifclassloaded{revtex}{%
8035   \Hy@Info{*** compatibility with revtex **** }%
8036   \def\revtex@checking#1#2{%
8037     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8038     \expandafter\def\csname b@#1\endcsname{#2}%
8039     \@SetMaxRnhefLabel{#1}%
8040     \expandafter\let\csname b@#1\endcsname\T@temp
8041   }%

```

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

```

8042 \ifundefined{@CITE}{\def\CITE{\@cite}}}%
8043 \providecommand*{\@extra@b@citeb}{}%
8044 \def\CITEX[#1]#2{%
8045   \let\@citea\@empty
8046   \leavevmode
8047   \unskip
8048   $~{%
8049     \scriptstyle
8050     \@CITE{%
8051       \@for\@citeb:=#2\do{%
8052         \@citea
8053         \def\@citea{,\penalty\@m\ }%
8054         \edef\@citeb{\expandafter\@firstofone\@citeb}%
8055         \if@filesw
8056           \immediate\write\@auxout{\string\citation{\@citeb}}%
8057         \fi
8058         \ifundefined{b@\@citeb\extra@b@citeb}{%
8059           \mbox{\reset@font\bfseries ?}%
8060           \G@refundefinedtrue
8061           \@latex@warning{%
8062             Citation `'\@citeb' on page \thepage \space undefined%
8063           }%
8064         }{%
8065           {\csname b@\@citeb\extra@b@citeb\endcsname}%
8066         }%
8067       }%
8068     }{#1}%
8069   }$%
8070 }%

```

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

```

8071 \def\citex[#1]#2{%
8072   \let\@citea\@empty
8073   \@cite{%
8074     \@for\@citeb:=#2\do{%
8075       \@citea
8076       \def\@citea{,\penalty\@m\ }%
8077       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8078       \if@filesw
8079         \immediate\write\@auxout{\string\citation{\@citeb}}%
8080       \fi
8081       \ifundefined{b@\@citeb\extra@b@citeb}{%

```

```

8082     \mbox{\reset@font\bfseries ?}%
8083     \G@refundefinedtrue
8084     \@latex@warning{%
8085         Citation ` \@citeb' on page \thepage \space undefined%
8086     }%
8087 }%
8088     \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8089 }%
8090 }%
8091 }{#1}%
8092 }%
8093 }{}

```

38.1 Package harvard

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

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

```

8094 \@ifpackageloaded{harvard}{%
8095   \Hy@AtBeginDocument{%
8096     \Hy@Info{*** compatibility with harvard **** }%
8097     \Hy@raiselinksfalse
8098     \def\harvardcite#1#2#3#4{%
8099       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8100       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8101       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8102       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8103     }%
8104     \def\HAR@citetoaux#1{%
8105       \iffiles\immediate\write\@auxout{\string\citation{#1}}\fi%
8106       \ifHy@backref
8107         \ifx\@empty\@currentlabel
8108           \else
8109             \@bsphack
8110             \iffiles
8111               \protected@write\@auxout{}{%
8112                 \string\@writefile{brf}{%
8113                   \string\backcite{#1}{%
8114                     {\thepage}{\@currentlabel}{\@currentHref}%
8115                   }%
8116                 }%
8117             }%
8118           \fi
8119           \@esphack
8120         \fi
8121       \fi
8122     }%
8123     \def\harvarditem{%
8124       \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%

```

```

8125 }%
8126 \def\@harvarditem[#1]#2#3#4#5\par{%
8127   \item[]%
8128   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8129   \if@filesw
8130     \begingroup
8131     \def\protect##1{\string ##1\space}%
8132     \ifthenelse{\equal{#1}{\null}}{%
8133       {\def\next{{#4}{#2}{#2}{#3}}}%
8134       {\def\next{{#4}{#2}{#1}{#3}}}%
8135     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8136     \endgroup
8137   \fi
8138   \protect\hspace*{-\labelwidth}%
8139   \protect\hspace*{-\labelsep}%
8140   \ignorespaces
8141   #5%
8142   \ifHy@backref
8143     \newblock
8144     \backref{\csname br@#4\endcsname}%
8145   \fi
8146   \par
8147 }%

```

\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:

```

8148 \long\def\HAR@checkcitations#1#2#3#4{%
8149   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8150   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8151     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8152     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8153       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8154       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8155         \else
8156           \@tempswattrue
8157         \fi
8158       \else
8159         \@tempswattrue
8160       \fi
8161     \else
8162       \@tempswattrue
8163     \fi
8164   }%
8165 }%
8166 }{}

```

38.2 Package chicago

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

```

8167 \@ifpackageloaded{chicago}{%

```

```

\citeN
8168 \def\citeN{%
8169 \def\@citesep{-1000}%
8170 \def\@cite##1##2{##1}%
8171 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8172 \@citedata@opt
8173 }%

\shortciteN
8174 \def\shortciteN{%
8175 \def\@citesep{-1000}%
8176 \def\@cite##1##2{##1}%
8177 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8178 \@citedata@opt
8179 }%

\@citedata@opt
8180 \def\@citedata@opt{%
8181 \let\@cite@opt\@empty
8182 \@ifnextchar [{%
8183 \@tempswatrue
8184 \@citedatax@opt
8185 }{%
8186 \@tempswafalse
8187 \@citedatax[]%
8188 }%
8189 }%

\@citedatax@opt
8190 \def\@citedatax@opt[#1]{%
8191 \def\@cite@opt{, #1}%
8192 \@citedatax[{#1}]%
8193 }%

8194 }{}

```

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.

```

8195 \ltx@ifclassloaded{slides}{%
8196 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8197 \def\Hy@PageAnchorSlidesPlain{%
8198 \advance\c@page\ltx@one
8199 \edef\Hy@TempPageAnchor{%
8200 \noexpand\hyper@{#1}%
8201 page.\the\c@slide.\the\c@overlay.\the\c@note%
8202 \ifnum\c@page=\ltx@one

```

```

8203     \else
8204     .\the\c@page
8205     \fi
8206     }%
8207 }%
8208 \advance\c@page-\ltx@one
8209 }%
8210 \def\Hy@PageAnchorSlide{%
8211 \advance\c@page\ltx@one
8212 \ifnum\c@page>\ltx@one
8213 \ltx@ifundefined{theHpage}{%
8214 \protected@edef\Hy@TheSlideOptionalPage{%
8215 \Hy@SlidesFormatOptionalPage{theHpage}%
8216 }%
8217 }{%
8218 \protected@edef\Hy@TheSlideOptionalPage{%
8219 \Hy@SlidesFormatOptionalPage{theHpage}%
8220 }%
8221 }%
8222 \else
8223 \def\Hy@TheSlideOptionalPage{}%
8224 \fi
8225 \advance\c@page-\ltx@one
8226 \pdfstringdef\@the@H@page{%
8227 \csname
8228 the%
8229 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8230 \Hy@SlidesPage
8231 \endcsname
8232 \Hy@TheSlideOptionalPage
8233 }%
8234 \ltx@gobblethree
8235 }%
8236 \def\Hy@SlidesPage{slide}%
8237 \g@addto@macro\slide{%
8238 \def\Hy@SlidesPage{slide}%
8239 }%
8240 \g@addto@macro\overlay{%
8241 \def\Hy@SlidesPage{overlay}%
8242 }%
8243 \g@addto@macro\note{%
8244 \def\Hy@SlidesPage{note}%
8245 }%
8246 }{%
8247 \def\Hy@PageAnchorSlidesPlain{}%
8248 \def\Hy@PageAnchorSlide{}%
8249 }
8250 \def\Hy@EveryPageAnchor{%
8251 \Hy@DistillerDestFix
8252 \ifHy@pageanchor
8253 \ifHy@hypertextnames
8254 \ifHy@plainpages
8255 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8256 \Hy@PageAnchorSlidesPlain

```



```

8257 \else
8258 \begingroup
8259 \let\@number\@firstofone
8260 \Hy@unicodedefalse
8261 \Hy@PageAnchorSlide
8262 \pdfstringdef\@the@H@page{\thepage}%
8263 \endgroup
8264 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8265 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8266 \fi
8267 \else
8268 \Hy@GlobalStepCount\Hy@pagecounter
8269 \def\Hy@TempPageAnchor{%
8270 \hyper@@anchor{page.\the\Hy@pagecounter}%
8271 }%
8272 \fi
8273 \vbox to 0pt{%
8274 \kern\voffset
8275 \kern\topmargin
8276 \kern-1bp\relax
8277 \hbox to 0pt{%
8278 \kern\hoffset
8279 \kern\ifodd\value{page}%
8280 \oddsidemargin
8281 \else
8282 \evensidemargin
8283 \fi
8284 \kern-1bp\relax
8285 \Hy@TempPageAnchor\relax
8286 \hss
8287 }%
8288 \vss
8289 }%
8290 \fi
8291 }
8292 \g@addto@macro\Hy@EveryPageBoxHook{%
8293 \Hy@EveryPageAnchor
8294 }

```

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.

```

8295 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8296 % line in the \textt{toc}file.
8297 % \begin{macrocode}
8298 \providecommand\protected@file@percent{}
8299 \def\addcontentsline#1#2#3{% toc extension, type, tag
8300 \begingroup
8301 \let\label\@gobble
8302 \ifx\@currentHref\@empty

```

```

8303 \Hy@Warning{%
8304     No destination for bookmark of \string\addcontentsline,%
8305     \MessageBreak destination is added%
8306 }%
8307 \phantomsection
8308 \fi
8309 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8310 \begingroup
8311     \def\Hy@tempa{#1}%
8312     \ifx\Hy@tempa\Hy@bookmarkstype
8313         \Hy@WarningNoLine{%
8314             bookmark level for unknown #2 defaults to 0%
8315         }%
8316     \else
8317         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8318     \fi
8319 \endgroup
8320 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8321 \fi
8322 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8323 \Hy@writebookmark{\csname the#2\endcsname}%
8324     {#3}%
8325     {\@currentHref}%
8326     {\Hy@toplevel}%
8327     {#1}%
8328 \ifHy@verbose
8329 \begingroup
8330     \def\Hy@tempa{#3}%
8331     \@onelevel@sanitize\Hy@tempa
8332     \let\temp@online\on@line
8333     \let\on@line\@empty
8334     \Hy@Info{%
8335         bookmark\temp@online:\MessageBreak
8336         thecounter {\csname the#2\endcsname}\MessageBreak
8337         text {\Hy@tempa}\MessageBreak
8338         reference {\@currentHref}\MessageBreak
8339         toplevel {\Hy@toplevel}\MessageBreak
8340         type {#1}%
8341     }%
8342 \endgroup
8343 \fi
8344 \addtocontents{#1}{%
8345     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8346 }%
8347 \endgroup
8348 }

```

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

```

8349 \def\contentsline#1#2#3#4{%
8350 \begingroup
8351     \Hy@safe@activetrue
8352 \edef\x{\endgroup

```

```

8353 \def\noexpand\Hy@tocdestname{#4}%
8354 }\x
8355 \ifx\Hy@tocdestname\ltx@empty
8356 \csname l@#1\endcsname{#2}{#3}%
8357 \else
8358 \ifcase\Hy@linktoc % none
8359 \csname l@#1\endcsname{#2}{#3}%
8360 \or % section
8361 \csname l@#1\endcsname{%
8362 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8363 }{#3}%
8364 \or % page
8365 \def\Hy@temp{#3}%
8366 \ifx\Hy@temp\ltx@empty
8367 \csname l@#1\endcsname{#2}{#3}%
8368 \else
8369 \csname l@#1\endcsname{{#2}}{%
8370 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8371 }%
8372 \fi
8373 \else % all
8374 \def\Hy@temp{#3}%
8375 \ifx\Hy@temp\ltx@empty
8376 \csname l@#1\endcsname{%
8377 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8378 }{}}%
8379 \else
8380 \csname l@#1\endcsname{%
8381 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8382 }{%
8383 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8384 }%
8385 \fi
8386 \fi
8387 \fi
8388 }

8389 \endpackage
8390 \ifcheck
8391 \checklatex
8392 \checkcommand\def\addcontentsline#1#2#3{%
8393 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8394 }
8395 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8396 \endcheck
8397 \ifcheck

```

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.

```

8398 \let\H@definecounter\@definecounter
8399 \def\@definecounter#1{%

```

```

8400 \H@definecounter{#1}%
8401 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8402 }

```

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.

```

8403 \let\H@newctr\@newctr
8404 \def\@newctr#1[#2]{%
8405   \H@newctr#1[#2]}%
8406 \expandafter\gdef\csname theH#1\endcsname{%
8407   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}}%
8408 }%
8409 }

```

42 AMS \LaTeX compatibility

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

Version 6.77p uses a patch by Ross Moore.

```

8410 \@ifpackageloaded{amsmath}{%
8411   \def\Hy@make@anchor{%
8412     \Hy@MakeCurrentHrefAuto{AMS}%
8413     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8414   }%
8415   \def\Hy@make@df@tag@@#1{%
8416     \gdef\df@tag{%
8417       \maketag@@@{\Hy@make@anchor#1}%
8418       \def\@currentlabel{#1}%
8419     }%
8420   }%
8421   \def\Hy@make@df@tag@@@#1{%
8422     \gdef\df@tag{%
8423       \tagform@{\Hy@make@anchor#1}%
8424       \toks@{\xp{p@equation{#1}}}%
8425       \edef\@currentlabel{\the\toks@}%
8426     }%
8427   }%
8428   \let\HyOrg@make@df@tag@@\make@df@tag@@
8429   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8430   \let\make@df@tag@@\Hy@make@df@tag@@
8431   \let\make@df@tag@@@\Hy@make@df@tag@@@
8432 }{}

```

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

```

8433 \@ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
8434   \let\H@seteqlabel\@seteqlabel
8435   \def\@seteqlabel#1{%
8436     \H@seteqlabel{#1}%
8437     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%

```

```

8438 \Hy@raisedlink{%
8439 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8440 }%
8441 }%
8442 }{}

```

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.

```

8443 \let\HyOrg@addtoreset\@addtoreset
8444 \def\@addtoreset#1#2{%
8445 \HyOrg@addtoreset{#1}{#2}%
8446 \expandafter\edef\csname theH#1\endcsname{%
8447 \expandafter\noexpand
8448 \csname the\@ifundefined{theH#2}{}H#2\endcsname
8449 .\noexpand\the\noexpand\value{#1}}%
8450 }%
8451 }

```

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

```

8452 \</package>
8453 \*check>
8454 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8455 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8456 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8457 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8458 \@addtoreset{#2}{#3}%
8459 \@xp\xdef\csname the#2\endcsname{%
8460 \@xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8461 }%
8462 }%
8463 }%
8464 }%
8465 \</check>
8466 \*package>
8467 \ifpackageloaded{amsmath}{%
8468 \@ifpackagelater{amsmath}{1999/12/14}{%
8469 \renewcommand*\numberwithin}[3][\arabic]{%
8470 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8471 \@ifundefined{c@#3}{\@nocnterr{#3}}{%

```

```

8472 \HyOrg@addtoreset{#2}{#3}%
8473 \@xp\xdef\csname the#2\endcsname{%
8474 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8475 }%
8476 \@xp\xdef\csname theH#2\endcsname{%
8477 \@xp\@nx
8478 \csname the\@ifundefined{theH#3}{}H#3\endcsname
8479 .\@nx#1{#2}%
8480 }%
8481 }%
8482 }%
8483 }%
8484 }{%
8485 \Hy@WarningNoLine{%
8486 \string\numberwithin\space of package `amsmath' %
8487 only fixed\MessageBreak
8488 for version 2000/06/06 v2.12 or newer%
8489 }%
8490 }%
8491 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8492 \ifHy@hyperfigures
8493 \let\Hy@Gin@setfile\Gin@setfile
8494 \def\Gin@setfile#1#2#3{%
8495 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8496 }%
8497 \fi
8498 \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.

```

8499 \ifHy@hyperindex
8500 \def\HyInd@ParenLeft{()%
8501 \def\HyInd@ParenRight{}}%
8502 \def\hyperindexformat#1#2{%
8503 \let\HyOrg@hyperpage\hyperpage
8504 \let\hyperpage\@firstofone
8505 #1{\HyOrg@hyperpage{#2}}%
8506 \let\hyperpage\HyOrg@hyperpage

```

```

8507 }%
8508 \Hy@nextfalse
8509 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8510 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8511 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8512 \begingroup
8513 \lccode`|= \expandafter`\HyInd@EncapChar\relax
8514 \lccode`\/= `\\ \relax
8515 \lowercase{\endgroup
8516 \ifHy@next
8517 \let\HyInd@org@wrindex\@wrindex
8518 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8519 \def\HyInd@@wrindex#1#2|#3|#4\{\%
8520 \ifx\|#3\%
8521 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8522 \else
8523 \HyInd@@@wrindex{#1}{#2}#3\%
8524 \fi
8525 }%
8526 \def\HyInd@@@wrindex#1#2#3#4\{\%
8527 \def\Hy@temp@A{#3}%
8528 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8529 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8530 \relax
8531 \HyInd@org@wrindex{#1}{%
8532 #2|hyperindexformat{/#3#4}%
8533 }%
8534 \else
8535 \ifx\|#4\%
8536 \ifx\Hy@temp@A\HyInd@ParenRight
8537 \HyInd@org@wrindex{#1}{#2|#3}%
8538 \else
8539 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8540 \fi
8541 \else
8542 \HyInd@org@wrindex{#1}{%
8543 #2|#3hyperindexformat{/#4}%
8544 }%
8545 \fi
8546 \fi
8547 }%
8548 \else
8549 \def\@wrindex#1{\@wrindex#1||\}%
8550 \def\@wrindex#1|#2|#3\{\%
8551 \if@filesw
8552 \ifx\|#2\%
8553 \protected@write\@indexfile{\%
8554 \string\indexentry{#1|hyperpage}{\thepage}%
8555 }%
8556 \else
8557 \HyInd@@@wrindex{#1}#2\%
8558 \fi
8559 \fi
8560 \endgroup

```

```

8561 \@esphack
8562 }%
8563 \def\HyInd@@@wrindex#1#2#3\{\%
8564 \def\Hy@temp@A{#2}%
8565 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8566 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8567 \relax
8568 \protected@write\@indexfile{\%
8569 \string\indexentry{\%
8570 #1|hyperindexformat{/#2#3}%
8571 }\the page}%
8572 }%
8573 \else
8574 \ifx\#3\%
8575 \ifx\Hy@temp@A\HyInd@ParenRight
8576 \HyInd@DefKey{#1}%
8577 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8578 \let\Hy@temp\ltx@empty
8579 }{\%
8580 \expandafter\let\expandafter\Hy@temp
8581 \csname HyInd@(\HyInd@key)\endcsname
8582 }%
8583 \protected@write\@indexfile{\%
8584 \string\indexentry{#1|#2\Hy@temp}\the page}%
8585 }%
8586 \else
8587 \protected@write\@indexfile{\%
8588 \string\indexentry{#1|#2hyperpage}\the page}%
8589 }%
8590 \HyInd@DefKey{#1}%
8591 \expandafter
8592 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8593 hyperpage%
8594 }%
8595 \fi
8596 \else
8597 \protected@write\@indexfile{\%
8598 \string\indexentry{\%
8599 #1|#2hyperindexformat{/#3}%
8600 }\the page}%
8601 }%
8602 \ifx\Hy@temp@A\HyInd@ParenLeft
8603 \HyInd@DefKey{#1}%
8604 \expandafter
8605 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8606 hyperindexformat{/#3}%
8607 }%
8608 \fi
8609 \fi
8610 \fi
8611 }%
8612 \def\HyInd@DefKey#1{\%
8613 \begingroup
8614 \let\protect\@unexpandable@protect

```



```

8615     \edef\Hy@temp{#1}%
8616     \ltx@onelevel@sanitize\Hy@temp
8617     \global\let\HyInd@key\Hy@temp
8618     \endgroup
8619   }%
8620   \fi
8621 }%
8622 \fi
8623 \Hy@DisableOption{hyperindex}
8624 \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.

```

8625 \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.

```

8626 \def\hyperpage#1{%
8627   \HyInd@hyperpage#1\nohyperpage{}\@nil
8628 }
8629 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8630   \HyInd@@hyperpage{#1}%
8631   #2%
8632   \def\Hy@temp{#3}%
8633   \ifx\Hy@temp\@empty
8634     \else
8635       \ltx@ReturnAfterFi{%
8636         \HyInd@hyperpage#3\@nil
8637       }%
8638     \fi
8639 }
8640 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8641 \def\@hyperpage#1--#2--#3\{\{%
8642   \ifx\#2\%
8643     \@commahyperpage{#1}%
8644   \else
8645     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8646   \fi
8647 }
8648 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
8649 \def\@commahyperpage#1, #2,#3\{\{%
8650   \ifx\#2\%
8651     \HyInd@pagelink{#1}%
8652   \else
8653     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8654   \fi
8655 }

```

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

```

8656 \def\HyInd@pagelink#1{%
8657   \begingroup
8658   \toks@={}%
8659   \HyInd@removespaces#1 \@nil

```

```

8660 \endgroup
8661 }
8662 \def\HyInd@removespaces#1 #2\@nil{%
8663 \toks@=\expandafter{\the\toks@#1}%
8664 \ifx\#2\%
8665 \edef\x{\the\toks@}%
8666 \ifx\x\@empty
8667 \else
8668 \hyperlink{page.\the\toks@}{\the\toks@}%
8669 \fi
8670 \else
8671 \ltx@ReturnAfterFi{%
8672 \HyInd@removespaces#2\@nil
8673 }%
8674 \fi
8675 }

```

45 Compatibility with foiltex

```

8676 \@ifclassloaded{foils}{%
8677 \providecommand*\ext@table{lot}%
8678 \providecommand*\ext@figure{lof}%
8679 }{}

```

46 Compatibility with seminar slide package

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

```

8680 \@ifclassloaded{seminar}{%
8681 \Hy@seminarstrue
8682 \providecommand\theHslide{\arabic{slide}}%
8683 }{}%
8684 \Hy@seminarslidesfalse
8685 }
8686 \@ifpackageloaded{slidesec}{%
8687 \providecommand\theHslidesection {\arabic{slidesection}}%
8688 \providecommand\theHslidesubsection{%
8689 \theHslidesection.\arabic{slidesubsection}}%
8690 }%
8691 \def\slide@heading[#1]#2{%
8692 \H@refstepcounter{slidesection}%
8693 \@addtoreset{slidesubsection}{slidesection}%
8694 \addtocontents{los}{%
8695 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8696 {\@SCTR}{\slideheading.\theslidesection}%
8697 }%
8698 \def\Hy@tempa{#2}%
8699 \ifx\Hy@tempa\@empty
8700 \else
8701 {%
8702 \edef\@currentlabel{%
8703 \csname p@slidesection\endcsname\theslidesection
8704 }%

```

```

8705     \makeslideheading{#2}%
8706 }%
8707 \fi
8708 \gdef\theslideheading{#1}%
8709 \gdef\theslidesubheading{}%
8710 \ifHy@bookmarksnumbered
8711     \def\Hy@slidetitle{\theslide\space #1}%
8712 \else
8713     \def\Hy@slidetitle{#1}%
8714 \fi
8715 \ifHy@hypertextnames
8716     \ifHy@naturalnames
8717         \hyper@@anchor{slideheading.\theslide\space #1}%
8718         \Hy@writebookmark
8719             {\theslide\space #1}%
8720             {\Hy@slidetitle}%
8721             {slideheading.\theslide\space #1}%
8722             {1}%
8723             {toc}%
8724     \else
8725         \hyper@@anchor{slideheading.\theHslide\space #1}%
8726         \Hy@writebookmark
8727             {\theslide\space #1}%
8728             {\Hy@slidetitle}%
8729             {slideheading.\theHslide\space #1}%
8730             {1}%
8731             {toc}%
8732     \fi
8733 \else
8734     \Hy@GlobalStepCount\Hy@linkcounter
8735     \hyper@@anchor{slideheading.\the\Hy@linkcounter}%
8736     \Hy@writebookmark
8737         {\theslide\space #1}%
8738         {\Hy@slidetitle}%
8739         {slideheading.\the\Hy@linkcounter}%
8740         {1}%
8741         {toc}%
8742 \fi
8743 }%
8744 \def\slide@subheading[#1]#2{%
8745     \H@refstepcounter{slidesubsection}%
8746     \addtocontents{los}{%
8747         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8748         {\@SCTR}{slideheading.\theslide\space #1}%
8749     }%
8750     \def\Hy@tempa{#2}%
8751     \ifx\Hy@tempa\@empty
8752     \else
8753         {%
8754             \edef\@currentlabel{%
8755                 \csname p@slidesubsection\endcsname\theslide\space #1
8756             }%
8757             \makeslidesubheading{#2}%
8758         }%

```

```

8759 \fi
8760 \gdef\theslidesubheading{#1}%
8761 \ifHy@bookmarksnumbered
8762 \def\Hy@slidetitle{\theslidesubsection\space #1}%
8763 \else
8764 \def\Hy@slidetitle{#1}%
8765 \fi
8766 \ifHy@hypertextnames
8767 \ifHy@naturalnames
8768 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8769 \Hy@writebookmark
8770 {\theslidesubsection}%
8771 {\Hy@slidetitle}%
8772 {slideheading.\theslidesubsection}%
8773 {2}%
8774 {toc}%
8775 \else
8776 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8777 \Hy@writebookmark
8778 {\theslidesubsection}%
8779 {\Hy@slidetitle}%
8780 {slideheading.\theHslidesubsection}%
8781 {2}%
8782 {toc}%
8783 \fi
8784 \else
8785 \Hy@GlobalStepCount\Hy@linkcounter
8786 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8787 \Hy@writebookmark
8788 {\theslidesubsection}%
8789 {\Hy@slidetitle}%
8790 {slideheading.\the\Hy@linkcounter}%
8791 {1}%
8792 {toc}%
8793 \fi
8794 }%
8795 \providecommand*{\listslidenam}{List of Slides}%
8796 \def\listofslides{%
8797 \section*{%
8798 \listslidenam
8799 \@mkboth{%
8800 \expandafter\MakeUppercase\listslidenam
8801 }{%
8802 \expandafter\MakeUppercase\listslidenam
8803 }%
8804 }%
8805 \def\l@slide##1##2##3##4{%
8806 \slide@undottedcline{%
8807 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8808 }{}%
8809 }%
8810 \let\l@subslide\l@slide
8811 \@startlos
8812 }%

```

```

8813 \def\slide@contents{%
8814   \def\l@slide##1##2##3##4{%
8815     \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8816   }%
8817   \let\l@subslide\@gobblefour
8818   \@startlos
8819 }%
8820 \def\Slide@contents{%
8821   \def\l@slide##1##2##3##4{%
8822     \ifcase\lslide@flag
8823       \message{##1 ** \the\c@slidesection}%
8824       \ifnum##1>\c@slidesection
8825         \def\lslide@flag{1}%
8826         {%
8827           \large
8828           \slide@cline{%
8829             \slidenumberline{$\rightarrow\bullet$}%
8830             {\hyperlink{##4}{##2}}}%
8831           }{##3}%
8832         }%
8833       \else
8834         {%
8835           \large
8836           \slide@cline{%
8837             \slidenumberline{$\surd\;\bullet$}%
8838             {\hyperlink{##4}{##2}}}%
8839           }{##3}%
8840         }%
8841       \fi
8842     \or
8843     \def\lslide@flag{2}%
8844     {%
8845       \large
8846       \slide@cline{%
8847         \slidenumberline{$\bullet$}%
8848         {\hyperlink{##4}{##2}}}%
8849       }{##3}%
8850     }%
8851     \or
8852     {%
8853       \large
8854       \slide@cline{%
8855         \slidenumberline{$\bullet$}%
8856         {\hyperlink{##4}{##2}}}%
8857       }{##3}%
8858     }%
8859     \fi
8860   }%
8861   \def\l@subslide##1##2##3##4{%
8862     \ifnum\lslide@flag=1 %
8863       \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
8864     \fi
8865   }%
8866   \def\lslide@flag{0}%

```

```

8867 \startlos
8868 }%
8869 }{}

```

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.)

```

8870 \ifHy@texht
8871 \expandafter\endinput
8872 \fi
8873 \let\real@setref\@setref
8874 \def\@setref#1#2#3{% csname, extract group, refname
8875 \ifx#1\relax
8876 \protect\G@refundefinedtrue
8877 \nfss@text{\reset@font\bfseries ??}%
8878 \@latex@warning{%
8879 Reference `#3' on page \thepage \space undefined%
8880 }%
8881 \else
8882 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8883 \fi
8884 }

```

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

```

8885 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8886 \begingroup
8887 \toks0={\hyper@link{#5}{#4}}%
8888 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8889 \edef\x{\endgroup
8890 \the\toks0 {\the\toks1 }%
8891 }%
8892 \x
8893 }
8894 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8895 \ifx#1\relax
8896 \protect\G@refundefinedtrue
8897 \nfss@text{\reset@font\bfseries ??}%
8898 \@latex@warning{%
8899 Reference `#3' on page \thepage \space undefined%
8900 }%
8901 \else
8902 \protect\hyper@@link
8903 {\expandafter\@fifthoffive#1}%
8904 {page.\expandafter\@secondoffive#1}%
8905 {\expandafter\@secondoffive#1}%
8906 \fi
8907 }
8908 </package>
8909 <*check>
8910 \checklatex
8911 \checkcommand\def\@setref#1#2#3{%
8912 \ifx#1\relax
8913 \protect\G@refundefinedtrue

```

```

8914 \nfss@text{\reset@font\bfseries ??}%
8915 \@latex@warning{%
8916     Reference `#3' on page \thepage\space undefined%
8917 }%
8918 \else
8919 \expandafter#2#1\null
8920 \fi
8921 }
8922 </check>
8923 <*package>

```

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

```

8924 \def\HyRef@StarSetRef#1{%
8925 \begingroup
8926 \Hy@safe@activetrue
8927 \edef\x{#1}%
8928 \@onelevel@sanitize\x
8929 \edef\x{\endgroup
8930 \noexpand\HyRef@@StarSetRef
8931 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8932 }%
8933 \x
8934 }
8935 \def\HyRef@@StarSetRef#1#2#3{%
8936 \ifx#1\@undefined
8937 \let#1\relax
8938 \fi
8939 \real@setref#1#3{#2}%
8940 }
8941 \def\@refstar#1{%
8942 \HyRef@StarSetRef{#1}\@firstoffive
8943 }
8944 \def\@pagerefstar#1{%
8945 \HyRef@StarSetRef{#1}\@secondoffive
8946 }
8947 \def\@namerefstar#1{%
8948 \HyRef@StarSetRef{#1}\@thirdoffive
8949 }
8950
8951 \Hy@AtBeginDocument{%
8952 \@ifpackageloaded{varioref}{%
8953 \def\@Refstar#1{%
8954 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8955 }%
8956 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8957 \MakeUppercase#1%
8958 }%
8959 \DeclareRobustCommand*\Ref*{%
8960 \@ifstar\@Refstar\HyRef@Ref
8961 }%
8962 \def\HyRef@Ref#1{%
8963 \hyperref[#{1}]{\Ref*{#1}}%
8964 }%

```

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

```

8965 %Fmi
8966 \ifdefined\vp@gerefstar
8967 \renewcommand\Vref@star[2][]{%
8968   \begingroup
8969   \let\T@pageref\@pagerefstar
8970   \Ref*{#2}
8971   \vpageref[#1]{#2}%
8972   \endgroup
8973 }%
8974 \renewcommand\Vr@f[2][]{%
8975   \begingroup
8976   \let\T@pageref\@pagerefstar
8977   \hyperref[{#2}]{%
8978     \Ref*{#2}
8979     \vpageref[#1]{#2}%
8980   }%
8981   \endgroup
8982 }%
8983 \renewcommand\vr@f[2][]{%
8984   \begingroup
8985   \let\T@pageref\@pagerefstar
8986   \hyperref[{#2}]{%
8987     \ref*{#2}
8988     \vpageref[#1]{#2}%
8989   }%
8990   \endgroup
8991 }%
8992 \renewcommand\vref@star[2][]{%
8993   \begingroup
8994   \let\T@pageref\@pagerefstar
8995   \ref*{#2}
8996   \vpageref[#1]{#2}%
8997   \endgroup
8998 }%

```

old varioref:

```

8999 \else
9000 \def\Vr@f#1{%
9001   \leavevmode\unskip\vref@space
9002   \hyperref[{#1}]{%
9003     \Ref*{#1}%
9004     \let\vref@space\nobreakspace
9005     \@vpageref\unskip}{#1}%
9006   }%
9007 }%
9008 \def\vr@f#1{%
9009   \leavevmode\unskip\vref@space
9010   \begingroup
9011   \let\T@pageref\@pagerefstar
9012   \hyperref[{#1}]{%
9013     \ref*{#1}%
9014     \vpageref\unskip}{#1}%
9015   }%

```



```

9016 \endgroup
9017 }%
9018 \fi
9019 %FMi -end mod
9020 }{}%
9021 }
9022
9023 \DeclareRobustCommand*\autopageref{%
9024 \ifstar{%
9025 \HyRef@autopagerefname\pageref*%
9026 }\HyRef@autopageref
9027 }
9028 \def\HyRef@autopageref#1{%
9029 \hyperref[#{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9030 }
9031 \def\HyRef@autopagerefname{%
9032 \ltx@ifundefined{pageautorefname}{%
9033 \ltx@ifundefined{pagename}{%
9034 \Hy@Warning{No autoref name for `page'}%
9035 }{%
9036 \pagename\nobreakspace
9037 }%
9038 }{%
9039 \pageautorefname\nobreakspace
9040 }%
9041 }

```

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

```

9042 \DeclareRobustCommand*\autoref{%
9043 \leavevmode
9044 \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9045 }
9046 \def\HyRef@autoref#1#2{%
9047 \begingroup
9048 \Hy@safe@activetrue
9049 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9050 \endgroup
9051 }
9052 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9053 \HyRef@ShowKeysRef{#2}%
9054 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9055 \edef\HyRef@thisref{%
9056 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9057 }%
9058 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9059 \Hy@safe@activesfalse
9060 #3{%
9061 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9062 }{%
9063 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9064 }{%
9065 \HyRef@currentHtag
9066 \expandafter\@firstoffive#1\@empty\@empty\@empty

```

```

9067 \null
9068 }%
9069 \else
9070 \protect\G@refundefinedtrue
9071 \nfss@text{\reset@font\bfseries ??}%
9072 \@latex@warning{%
9073   Reference `#2' on page \thepage\space undefined%
9074 }%
9075 \fi
9076 }
9077 \def\HyRef@testreftype#1.#2\{%
9078 \ltx@ifundefined{#1autorefname}{%
9079 \ltx@ifundefined{#1name}{%
9080 \HyRef@StripStar#1\*\@nil{#1}%
9081 \ltx@ifundefined{\HyRef@name autorefname}{%
9082 \ltx@ifundefined{\HyRef@name name}{%
9083 \def\HyRef@currentHtag{%
9084 \Hy@Warning{No autoref name for `#1'}%
9085 }{%
9086 \edef\HyRef@currentHtag{%
9087 \expandafter\noexpand\csname\HyRef@name name\endcsname
9088 \noexpand~%
9089 }%
9090 }%
9091 }{%
9092 \edef\HyRef@currentHtag{%
9093 \expandafter\noexpand
9094 \csname\HyRef@name autorefname\endcsname
9095 \noexpand~%
9096 }%
9097 }%
9098 }{%
9099 \edef\HyRef@currentHtag{%
9100 \expandafter\noexpand\csname#1name\endcsname
9101 \noexpand~%
9102 }%
9103 }%
9104 }{%
9105 \edef\HyRef@currentHtag{%
9106 \expandafter\noexpand\csname#1autorefname\endcsname
9107 \noexpand~%
9108 }%
9109 }%
9110 }
9111 \def\HyRef@StripStar#1*\@nil#3{%
9112 \def\HyRef@name{#2}%
9113 \ifx\HyRef@name\HyRef@CaseStar
9114 \def\HyRef@name{#1}%
9115 \else
9116 \def\HyRef@name{#3}%
9117 \fi
9118 }
9119 \def\HyRef@CaseStar{*\\}
9120 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

9121 \let\HyRef@ShowKeysRef\@gobble
9122 \def\HyRef@ShowKeysInit{%
9123   \begingroup\expandafter\expandafter\expandafter\endgroup
9124   \expandafter\ifx\csname SK@@label\endcsname\relax
9125   \else
9126     \ifx\SK@ref\@empty
9127     \else
9128       \def\HyRef@ShowKeysRef{%
9129         \SK@\SK@@ref
9130       }%
9131     \fi
9132   \fi
9133 }
9134 \@ifpackageloaded{showkeys}{%
9135   \HyRef@ShowKeysInit
9136 }{%
9137   \Hy@AtBeginDocument{%
9138     \@ifpackageloaded{showkeys}{%
9139       \HyRef@ShowKeysInit
9140     }{}%
9141   }%
9142 }

```

Defaults for the names that `\autoref` uses.

```

9143 \providecommand*\AMSautorefname{\equationautorefname}
9144 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9145 \providecommand*\Itemautorefname{\itemautorefname}
9146 \providecommand*\itemautorefname{item}
9147 \providecommand*\equationautorefname{Equation}
9148 \providecommand*\footnoteautorefname{footnote}
9149 \providecommand*\itemautorefname{item}
9150 \providecommand*\figureautorefname{Figure}
9151 \providecommand*\tableautorefname{Table}
9152 \providecommand*\partautorefname{Part}
9153 \providecommand*\appendixautorefname{Appendix}
9154 \providecommand*\chapterautorefname{chapter}
9155 \providecommand*\sectionautorefname{section}
9156 \providecommand*\subsectionautorefname{subsection}
9157 \providecommand*\subsubsectionautorefname{subsubsection}
9158 \providecommand*\paragraphautorefname{paragraph}
9159 \providecommand*\subparagraphautorefname{subparagraph}
9160 \providecommand*\FancyVerbLineautorefname{line}
9161 \providecommand*\theoremautorefname{Theorem}
9162 \providecommand*\pageautorefname{page}
9163 \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 pdf_{TEX} offers `\pdfescapestring`.

```
9164 <*pdftex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9165 \begingroup\expandafter\expandafter\expandafter\endgroup
9166 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9167   \begingroup
9168     \catcode`\|=0 %
9169     \@makeother\| %
9170     |@firstofone{|endgroup
9171     |def|Hy@pstringdef#1#2{%
9172       |begingroup
9173         |edef~{|string~}%
9174         |xdef|Hy@gtemp{#2}%
9175       |endgroup
9176       |let#1|Hy@gtemp
9177       |@onelevel@sanitize#1%
9178       |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9179       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9180       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9181     }%
9182     |def|Hy@ExchangeBackslash#1/#2|@nil{%
9183       #1%
9184       |ifx|\#2|\% %
9185       |else
9186         \| %
9187         |ltx@ReturnAfterFi{%
9188           |Hy@ExchangeBackslash#2|@nil
9189         }%
9190       |fi
9191     }%
9192   }%
9193   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9194     #1%
9195     \ifx\#2\% %
9196     \else
9197       \@backslashchar(%
9198       \ltx@ReturnAfterFi{%
9199         \Hy@ExchangeLeftParenthesis#2\@nil
9200       }%
9201     \fi
9202   }%
9203   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9204     #1%
9205     \ifx\#2\% %
9206     \else
```

```

9207    \@backslashchar)%
9208    \ltx@ReturnAfterFi{%
9209        \Hy@ExchangeRightParenthesis#2\@nil
9210    }%
9211    \fi
9212 }%
9213 \else
9214 \def\Hy@pstringdef#1#2{%
9215     \begingroup
9216     \edef~{\string~}%
9217     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9218     \endgroup
9219     \let#1\Hy@gtemp
9220 }%
9221 \fi
9222 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9223 < *pdfTeX>
9224 \providecommand*\XR@ext}{pdf}
9225 \Hy@setbreaklinks{true}
9226 \def\HyPat@ObjRef{%
9227     [0-9]*[1-9][0-9]* 0 R%
9228 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option pdfversion.

- pdfT_EX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfT_EX 1.30, 2005-08-081: \pdfminorversion

```

9229 \let\Hy@pdfminorversion\relax
9230 \begingroup\expandafter\expandafter\expandafter\endgroup
9231 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9232     \begingroup\expandafter\expandafter\expandafter\endgroup
9233     \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9234     \else
9235         \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9236     \fi
9237 \else
9238     \def\Hy@pdfminorversion{\pdfminorversion}%
9239 \fi
9240 \@ifundefined{Hy@pdfminorversion}{%
9241     \PackageInfo{hyperref}{%
9242         PDF version is not set, because pdfTeX is too old (<1.10a)%
9243     }%
9244 }{%
9245     \ifHy@ocgcolorlinks
9246         \ifnum\Hy@pdfmajorminor@version<105 %
9247             \kvsetkeys{Hyp}{pdfversion=1.5}%
9248         \fi
9249     \fi

```

```

9250 \ifHy@setpdfversion
9251 \ifnum\Hy@pdf@majorminor@version<105 %
9252 \ltx@ifundefined{pdfobjcompresslevel}{%
9253 }{%
9254 \ifHy@verbose
9255 \Hy@InfoNoLine{%
9256 PDF object streams are disabled, because they are%
9257 \MessageBreak
9258 not supported in requested PDF version %
9259 \Hy@pdf@majorversion.\Hy@pdf@minorversion
9260 }%
9261 \fi
9262 \pdfobjcompresslevel=\ltx@zero
9263 }%
9264 \fi
9265 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
9266 \else
9267 \let\Hy@temp\ltx@empty
9268 \def\Hy@temp@A#1#2{%
9269 \ifnum#1>\ltx@zero
9270 \edef\Hy@temp{%
9271 \Hy@temp
9272 \space\space
9273 \the#1\space #2%
9274 \ifnum#1=\ltx@one\else s\fi
9275 \MessageBreak
9276 }%
9277 \fi
9278 }%
9279 \Hy@temp@A\pdflastobj{PDF object}%
9280 \Hy@temp@A\pdflastxform{formXObject}%
9281 \Hy@temp@A\pdflastximage{imageXObject}%
9282 \Hy@temp@A\pdflastannot{annotation}%
9283 \ltx@ifundefined{pdflastlink}{%
9284 }{%
9285 \Hy@temp@A\pdflastlink{link}%
9286 }%
9287 \ifx\Hy@temp\ltx@empty
9288 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
9289 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
9290 \else
9291 \let\Hy@temp@A\ltx@empty
9292 \ifnum\Hy@pdf@majorminor@version=104 %
9293 \ifFileExists{pdf14.sty}{%
9294 \def\Hy@temp@A{%
9295 \MessageBreak
9296 Or \string\RequirePackage{pdf14} can be used%
9297 \MessageBreak
9298 before \string\documentclass\space as shortcut%
9299 }%
9300 }{}%
9301 \fi
9302 \Hy@WarningNoLine{%
9303 The PDF version number could not be set,\MessageBreak

```

```

9304         because some PDF objects are already written:%
9305         \MessageBreak
9306         \Hy@temp
9307         The version should be set as early as possible:%
9308         \MessageBreak
9309         \space\space
9310         \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
9311         \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
9312         \string\relax
9313         \ifnum\Hy@pdf@majorminor@version<105 %
9314         \ltx@ifundefined{pdfobjcompresslevel}{%
9315         }{%
9316         \MessageBreak
9317         \space\space
9318         \string\pdfobjcompresslevel=0\string\relax
9319         }%
9320         \fi
9321         \Hy@temp@A
9322         }%
9323         \fi
9324         \fi
9325         \PackageInfo{hyperref}{%
9326         \expandafter\string\Hy@pdfmajorversion.%
9327         \expandafter\string\Hy@pdfminorversion
9328         :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
9329         }%
9330         \fi
9331         \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
9332         \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
9333     }
9334     \Hy@DisableOption{pdfversion}%
9335     \ifHy@ocgcolorlinks
9336         \pdf@ifdraftmode{}{%
9337             \immediate\pdfobj{%
9338                 <<%
9339                 /Type/OCG%
9340                 /Name(View)%
9341                 /Usage<<%
9342                 /Print<<%
9343                 /PrintState/OFF%
9344                 >>%
9345                 /View<<%
9346                 /ViewState/ON%
9347                 >>%
9348                 >>%
9349                 >>%
9350             }%
9351             \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9352             \immediate\pdfobj{%
9353                 <<%
9354                 /Type/OCG%
9355                 /Name(Print)%
9356                 /Usage<<%
9357                 /Print<<%

```

```

9358         /PrintState/ON%
9359     >>%
9360     /View<<%
9361         /ViewState/OFF%
9362     >>%
9363 >>%
9364 >>%
9365 }%
9366 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9367 \immediate\pdfobj{%
9368     [%
9369         \OBJ@OCG@view\space\OBJ@OCG@print
9370     ]%
9371 }%
9372 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9373 \pdfcatalog{%
9374     /OCProperties<<%
9375         /OCGs \OBJ@OCGs
9376     /D<<%
9377         /OFF[\OBJ@OCG@print]%
9378     /AS[%
9379         <<%
9380             /Event/View%
9381             /OCGs \OBJ@OCGs
9382             /Category[/View]%
9383         >>%
9384         <<%
9385             /Event/Print%
9386             /OCGs \OBJ@OCGs
9387             /Category[/Print]%
9388         >>%
9389         <<%
9390             /Event/Export%
9391             /OCGs \OBJ@OCGs
9392             /Category[/Print]%
9393         >>%
9394     ]%
9395 >>%
9396 >>%
9397 }%
9398 \begingroup
9399 \edef\x{\endgroup
9400     \pdfpageresources{%
9401         \the\pdfpageresources
9402         /Properties<<%
9403             /OCView \OBJ@OCG@view
9404             /OCPrint \OBJ@OCG@print
9405         >>%
9406     }%
9407 }%
9408 \x
9409 }%
9410 \Hy@AtBeginDocument{%
9411     \def\Hy@colorlink#1{%

```



```

9412 \begingroup
9413 \ifHy@ocgcolorlinks
9414 \def\Hy@ocgcolor{#1}%
9415 \setbox0=\hbox\bgroup\color@begingroup
9416 \else
9417 \HyColor@UseColor#1%
9418 \fi
9419 }%
9420 \def\Hy@endcolorlink{%
9421 \ifHy@ocgcolorlinks
9422 \color@endgroup\egroup
9423 \mbox{%
9424 \pdfliteral page{/OC/OCPrint BDC}%
9425 \rlap{\copy0}%
9426 \pdfliteral page{EMC/OC/OCView BDC}%
9427 \begingroup
9428 \expandafter\HyColor@UseColor\Hy@ocgcolor
9429 \box0 %
9430 \endgroup
9431 \pdfliteral page{EMC}%
9432 }%
9433 \fi
9434 \endgroup
9435 }%
9436 }%
9437 \else
9438 \Hy@DisableOption{ocgcolorlinks}%
9439 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

9440 \def\setpdfinkmargin#1{%
9441 \begingroup
9442 \setlength{\dimen@}{#1}%
9443 \expandafter\endgroup
9444 \expandafter\pdfinkmargin\the\dimen@\relax
9445 }
9446 \ifx\pdfstartlink\undefined% less than version 14
9447 \let\pdfstartlink\pdfannotlink
9448 \let\pdfinkmargin\@tempdima
9449 \let\pdfxform\pdfform
9450 \let\pdfastxform\pdfastform
9451 \let\pdfrefxform\pdfrefform
9452 \else
9453 \pdfinkmargin1pt %
9454 \fi

```

First set up the default linking

```

9455 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9456 \Hy@WrapperDef\new@pdfink#1{%
9457 \ifhmode
9458 \@savsf\spacefactor
9459 \fi
9460 \Hy@SaveLastskip

```

```

9461 \Hy@VerboseAnchor{#1}%
9462 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9463 \Hy@DestName\Hy@pstringDest\@pdfview
9464 \Hy@RestoreLastskip
9465 \ifhmode
9466   \spacefactor\@savs
9467 \fi
9468 }
9469 \let\pdf@endanchor\@empty

```

\Hy@DestName Wrap the call of \pdfdest name in \Hy@DestName. Then it can easier be caught by package hypdestopt.

```

9470 \def\Hy@DestName#1#2{%
9471   \pdfdest name{#1}#2\relax
9472 }

```

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.

```

9473 \providecommand*\@pdfborder{0 0 1}
9474 \providecommand*\@pdfborderstyle{}
9475 \def\Hy@undefinedname{UNDEFINED}
9476 \def\find@pdflink#1#2{%
9477   \leavevmode
9478   \protected@edef\Hy@testname{#2}%
9479   \ifx\Hy@testname\@empty
9480     \Hy@Warning{%
9481       Empty destination name,\MessageBreak
9482       using '\Hy@undefinedname'%
9483     }%
9484     \let\Hy@testname\Hy@undefinedname
9485   \else
9486     \Hy@pstringdef\Hy@testname{%
9487       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9488     }%
9489   \fi
9490   \Hy@StartlinkName{%
9491     \ifHy@pdfa /F 4\fi
9492     \Hy@setpdfborder
9493     \Hy@setpdfhighlight
9494     \ifx\CurrentBorderColor\relax
9495       \else
9496         /C[\CurrentBorderColor]%
9497     \fi
9498   }\Hy@testname
9499   \expandafter\Hy@colorlink\csname @#1color\endcsname
9500 }
9501 \def\Hy@StartlinkName#1#2{%
9502   \pdfstartlink attr{#1}goto name{#2}\relax
9503 }
9504 \def\close@pdflink{%
9505   \Hy@endcolorlink
9506   \Hy@VerboseLinkStop

```

```

9507 \pdfendlink
9508 }
9509 \def\hyper@anchor#1{%
9510 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9511 }
9512 \def\hyper@anchorstart#1{%
9513 \new@pdfink{#1}%
9514 \Hy@activeanchortrue
9515 }
9516 \def\hyper@anchorend{%
9517 \pdf@endanchor
9518 \Hy@activeanchorfalse
9519 }
9520 \def\hyper@linkstart#1#2{%
9521 \Hy@VerboseLinkStart{#1}{#2}%
9522 \ltx@ifundefined{@#1bordercolor}{%
9523 \let\CurrentBorderColor\relax
9524 }{%
9525 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9526 }%
9527 \find@pdfink{#1}{#2}%
9528 }
9529 \def\hyper@linkend{\close@pdfink}
9530 \def\hyper@link#1#2#3{%
9531 \Hy@VerboseLinkStart{#1}{#2}%
9532 \ltx@ifundefined{@#1bordercolor}{%
9533 \let\CurrentBorderColor\relax
9534 }{%
9535 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9536 }%
9537 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9538 \close@pdfink
9539 }
9540 \let\CurrentBorderColor\@linkbordercolor
9541 \def\hyper@linkurl#1#2{%
9542 \begingroup
9543 \Hy@pstringdef\Hy@pstringURI{#2}%
9544 \hyper@chars
9545 \leavevmode
9546 \pdfstartlink
9547 attr{%
9548 \Hy@setpdfborder
9549 \Hy@setpdfhighlight
9550 \ifx\@urlbordercolor\relax
9551 \else
9552 /C[\@urlbordercolor]%
9553 \fi
9554 }%
9555 user{%
9556 /Subtype/Link%
9557 \ifHy@pdfa /F 4\fi
9558 /A<<%
9559 /Type/Action%
9560 /S/URI%

```

```

9561      /URI(\Hy@pstringURI)%
9562      \ifHy@href@ismap
9563      /IsMap true%
9564      \fi
9565      \Hy@href@nextactionraw
9566      >>%
9567      }%
9568      \relax
9569      \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9570      \close@pdflink
9571      \endgroup
9572 }
9573 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9574   \begingroup
9575     \def\Hy@pstringF{#2}%
9576     \Hy@CleanupFile\Hy@pstringF
9577     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9578     \Hy@pstringdef\Hy@pstringD{#3}%
9579     \Hy@MakeRemoteAction
9580     \leavevmode
9581     \pdfstartlink
9582     attr{%
9583       \Hy@setpdfborder
9584       \Hy@setpdfhighlight
9585       \ifx\@filebordercolor\relax
9586       \else
9587       /C[\@filebordercolor]%
9588       \fi
9589     }%
9590     user {%
9591       /Subtype/Link%
9592       \ifHy@pdfa /F 4\fi
9593       /A<<%
9594       /F(\Hy@pstringF)%
9595       /S/GoToR%
9596       \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}

```

```

9597      \ifx\#3\%
9598      /D[\Hy@href@page\@pdfremotestartview]%
9599      \else
9600      /D(\Hy@pstringD)%
9601      \fi
9602      \Hy@href@nextactionraw

```

```

9603     >>%
9604   }%
9605   \relax
9606   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9607   \close@pdflink
9608 \endgroup
9609 }
9610 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9611   \begingroup
9612   \Hy@pstringdef\Hy@pstringF{#1}%
9613   \Hy@pstringdef\Hy@pstringP{#3}%
9614   \leavevmode
9615   \pdfstartlink
9616   attr{%
9617     \Hy@setpdfborder
9618     \Hy@setpdfhighlight
9619     \ifx\@runbordercolor\relax
9620     \else
9621       /C[\@runbordercolor]%
9622     \fi
9623   }%
9624   user {%
9625     /Subtype/Link%
9626     \ifHy@pdfa /F 4\fi
9627     /A<<%
9628       /F(\Hy@pstringF)%
9629       /S/Launch%
9630       \Hy@SetNewWindow
9631       \ifx\|#3\|
9632       \else
9633         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9634       \fi
9635       \Hy@href@nextactionraw
9636     >>%
9637   }%
9638   \relax
9639   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9640   \close@pdflink
9641 \endgroup
9642 }

```

\PDF@SetupDox

```

9643 \def\PDF@SetupDoc{%
9644   \ifx\@pdfpagescrop\@empty
9645   \else
9646     \edef\process@me{%
9647       \pdfpagesattr=%
9648       /CropBox[\@pdfpagescrop]%
9649       \expandafter\ifx\expandafter\|the\pdfpagesattr\|
9650       \else
9651         ^^Jthe\pdfpagesattr
9652       \fi
9653     }%
9654   }%

```

```

9655 \process@me
9656 \fi
9657 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9658 \pdfcatalog{%
9659 /PageMode/\@pdfpagemode
9660 \ifx\@baseurl\@empty
9661 \else
9662 /URI<</Base(\Hy@pstringB)>>%
9663 \fi
9664 }%
9665 \ifx\@pdfstartpage\@empty
9666 \else
9667 \ifx\@pdfstartview\@empty
9668 \else
9669 openaction goto page\@pdfstartpage{\@pdfstartview}%
9670 \fi
9671 \fi
9672 \edef\Hy@temp{%
9673 \ifHy@pdftoolbar\else /HideToolbar true\fi
9674 \ifHy@pdfmenubar\else /HideMenubar true\fi
9675 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9676 \ifHy@pdfwindow /FitWindow true\fi
9677 \ifHy@pdfcenterwindow /CenterWindow true\fi
9678 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9679 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9680 \Hy@UseNameKey{Direction}\@pdfdirection
9681 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9682 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9683 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9684 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9685 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9686 \Hy@UseNameKey{Duplex}\@pdfduplex
9687 \ifx\@pdfpicktraybypdfsize\@empty
9688 \else
9689 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9690 \fi
9691 \ifx\@pdfprintpagerange\@empty
9692 \else
9693 /PrintPageRange[\@pdfprintpagerange]%
9694 \fi
9695 \ifx\@pdfnumcopies\@empty
9696 \else
9697 /NumCopies \@pdfnumcopies
9698 \fi
9699 }%
9700 \pdfcatalog{%
9701 \ifx\Hy@temp\@empty
9702 \else
9703 /ViewerPreferences<<\Hy@temp>>%
9704 \fi
9705 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9706 \ifx\@pdflang\relax
9707 \else
9708 /Lang(\@pdflang)%

```

```

9709 \fi
9710 }%
9711 }

```

\PDF@FinishDoc

```

9712 \def\PDF@FinishDoc{%
9713 \pdf@ifdraftmode{}{%
9714 \Hy@UseMaketitleInfos
9715 \HyInfo@GenerateAddons
9716 \pdfinfo{%
9717 /Author(\@pdfauthor)%
9718 /Title(\@pdftitle)%
9719 /Subject(\@pdfsubject)%
9720 /Creator(\@pdfcreator)%
9721 \ifx\@pdfcreationdate\@empty
9722 \else
9723 /CreationDate(\@pdfcreationdate)%
9724 \fi
9725 \ifx\@pdfmoddate\@empty
9726 \else
9727 /ModDate(\@pdfmoddate)%
9728 \fi
9729 \ifx\@pdfproducer\relax
9730 \else
9731 /Producer(\@pdfproducer)%
9732 \fi
9733 /Keywords(\@pdfkeywords)%
9734 \ifx\@pdftrapped\@empty
9735 \else
9736 /Trapped/\@pdftrapped
9737 \fi
9738 \HyInfo@Addons
9739 }%
9740 }%
9741 \Hy@DisableOption{pdfauthor}%
9742 \Hy@DisableOption{pdftitle}%
9743 \Hy@DisableOption{pdfsubject}%
9744 \Hy@DisableOption{pdfcreator}%
9745 \Hy@DisableOption{addtopdfcreator}%
9746 \Hy@DisableOption{pdfcreationdate}%
9747 \Hy@DisableOption{pdfmoddate}%
9748 \Hy@DisableOption{pdfproducer}%
9749 \Hy@DisableOption{pdfkeywords}%
9750 \Hy@DisableOption{pdftrapped}%
9751 \Hy@DisableOption{pdfinfo}%
9752 }

```

\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.

```

9753 \def\hyper@pagetransition{%
9754 \ifx\@pdfpagetransition\relax
9755 \else
9756 \expandafter\Hy@RemoveTransPageAttr

```

```

9757 \the\pdfpageattr^^J/Trans{}}>>\END
9758 \ifx\@pdfpagetransition\@empty
9759 \else
9760 \edef\@processme{%
9761 \global\pdfpageattr{%
9762 \the\pdfpageattr
9763 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9764 }%
9765 }%
9766 \@processme
9767 \fi
9768 \fi
9769 }

```

`\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.

```

9770 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9771 \ifx\#2\%
9772 \global\pdfpageattr{#1}%
9773 \else
9774 \Hy@RemoveTransPageAttr#1#4\END
9775 \fi
9776 }

```

`\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`.

```

9777 \def\hyper@pageduration{%
9778 \ifx\@pdfpageduration\relax
9779 \else
9780 \expandafter
9781 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{}} \END
9782 \ifx\@pdfpageduration\@empty
9783 \else
9784 \edef\@processme{%
9785 \global\pdfpageattr{%
9786 \the\pdfpageattr
9787 ^^J/Dur \@pdfpageduration\space
9788 }%
9789 }%
9790 \@processme
9791 \fi
9792 \fi
9793 }

```

`\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.

```

9794 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%

```



```

9795 \ifx\|#2\|%
9796 \global\pdfpageattr{#1}%
9797 \else
9798 \Hy@RemoveDurPageAttr#1#4\END
9799 \fi
9800 }

9801 \pdf@ifdraftmode{}{%
9802 \g@addto@macro\Hy@EveryPageHook{%
9803 \hyper@pagetransition
9804 \hyper@pageduration
9805 }%
9806 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9807 \pdfifx{pdf}
9808 \ifx\pdfifx{xetex}
9809 \Hy@AtBeginDocument{%
9810 \ifHy@setpagesize
9811 \expandafter\@firstofone
9812 \else
9813 \expandafter\@gobble
9814 \fi
9815 {%
9816 \@ifclassloaded{seminar}{%
9817 \pdfifx{pdf}
9818 \setlength{\pdfhorigin}{1truein}%
9819 \setlength{\pdfvorigin}{1truein}%
9820 \pdfifx{pdf}
9821 \ifportrait
9822 \ifdim\paperwidth=\z@
9823 \else
9824 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9825 \fi
9826 \ifdim\paperheight=\z@
9827 \else
9828 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9829 \fi
9830 \else
9831 \ifdim\paperheight=\z@
9832 \else
9833 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9834 \fi
9835 \ifdim\paperwidth=\z@
9836 \else
9837 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9838 \fi
9839 \fi
9840 }{%
9841 \ltx@ifundefined{stockwidth}{%
9842 \ifdim\paperwidth>\z@
9843 \setlength{\pdfpagewidth}{\paperwidth}%
9844 \fi
9845 \ifdim\paperheight>\z@

```

```

9846     \setlength{\pdfpageheight}{\paperheight}%
9847     \fi
9848   }{%
9849     \ifdim\stockwidth>\z@
9850       \setlength{\pdfpagewidth}{\stockwidth}%
9851     \fi
9852     \ifdim\stockheight>\z@
9853       \setlength{\pdfpageheight}{\stockheight}%
9854     \fi
9855   }%
9856 }%
9857 }%
9858 \Hy@DisableOption{setpagesize}%
9859 }
9860 </pdfTeX | xetex>
9861 (*pdfTeX)
9862 \def\Acrobatmenu#1#2{%
9863   \Hy@Acrobatmenu{#1}{#2}{%
9864     \leavevmode
9865     \EdefEscapeName\Hy@temp@menu{#1}%
9866     \pdfstartlink
9867       attr{%
9868         \Hy@setpdfborder
9869         \Hy@setpdfhighlight
9870         \ifx\@menubordercolor\relax
9871           \else
9872             /C[\@menubordercolor]%
9873         \fi
9874       }%
9875       user{%
9876         /Subtype/Link%
9877         \ifHy@pdfa /F 4\fi
9878         /A<<%
9879         /S/Named%
9880         /N/\Hy@temp@menu
9881         \Hy@href@nextactionraw
9882       >>%
9883     }%
9884     \relax
9885     \Hy@colorlink\@menucolor#2%
9886     \close@pdflink
9887   }%
9888 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package ‘atbegshi’ \AtBeginShipoutFirst does not add a additional box layer.

change 2020-10-01: the code has been removed as outdated.

9889 </pdfTeX>

47.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \special commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL’s may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the 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.

```
9890 <*hypertex>
9891 \providecommand*{\XR@ext}{dvi}
9892 \let\PDF@FinishDoc\ltx@empty
9893 \def\PDF@SetupDoc{%
9894   \ifx\@baseurl\@empty
9895     \else
9896       \special{html:<base href="\@baseurl">}%
9897     \fi
9898 }
9899 \Hy@WrapperDef\hyper@anchor#1{%
9900   \Hy@SaveLastskip
9901   \Hy@VerboseAnchor{#1}%
9902   \begingroup
```

```

9903 \let\protect=\string
9904 \hyper@chars
9905 \special{html:<a name=%
9906     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9907 \endgroup
9908 \Hy@activeanchortrue
9909 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9910 \special{html:</a>}}%
9911 \Hy@activeanchorfalse
9912 \Hy@RestoreLastskip
9913 }
9914 \Hy@WrapperDef\hyper@anchorstart#1{%
9915 \Hy@SaveLastskip
9916 \Hy@VerboseAnchor{#1}%
9917 \begingroup
9918 \hyper@chars
9919 \special{html:<a name=%
9920     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9921 \endgroup
9922 \Hy@activeanchortrue
9923 }
9924 \def\hyper@anchorend{%
9925 \special{html:</a>}}%
9926 \Hy@activeanchorfalse
9927 \Hy@RestoreLastskip
9928 }
9929 \def\@urlltype{url}
9930 \def\hyper@linkstart#1#2{%
9931 \Hy@VerboseLinkStart{#1}{#2}%
9932 \expandafter\Hy@colorlink\csname @#1color\endcsname
9933 \def\Hy@tempa{#1}%
9934 \ifx\Hy@tempa\@urlltype
9935 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9936 \else
9937 \begingroup
9938 \hyper@chars
9939 \special{html:<a href=%
9940     \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
9941 \endgroup
9942 \fi
9943 }
9944 \def\hyper@linkend{%
9945 \special{html:</a>}}%
9946 \Hy@endcolorlink
9947 }
9948 \def\hyper@linkfile#1#2#3{%
9949 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9950 }
9951 \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.

```

9952 \leavevmode

```

```

9953 \ifHy@raiselinks
9954 \Hy@SaveSpaceFactor
9955 \Hy@SaveSavedSpaceFactor
9956 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9957 \Hy@RestoreSavedSpaceFactor
9958 \@linkdim\dp\@tempboxa
9959 \lower\@linkdim\hbox{%
9960 \hyper@chars
9961 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9962 }%
9963 \Hy@colorlink\@urlcolor
9964 \Hy@RestoreSpaceFactor
9965 #1%
9966 \Hy@SaveSpaceFactor
9967 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

9968 \advance\@linkdim by -6.5\p@
9969 \raise\@linkdim\hbox{\special{html:</a>}}%
9970 \Hy@endcolorlink
9971 \Hy@RestoreSpaceFactor
9972 \else
9973 \begingroup
9974 \hyper@chars
9975 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9976 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9977 \special{html:</a>}}%
9978 \Hy@endcolorlink
9979 \endgroup
9980 \fi
9981 }

```

Very poor implementation of \hyper@link without considering #1.

```

9982 \def\hyper@link#1#2#3{%
9983 \Hy@VerboseLinkStart{#1}{#2}%
9984 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9985 }

9986 \def\hyper@image#1#2{%
9987 \begingroup
9988 \hyper@chars
9989 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9990 \endgroup
9991 }
9992 </hypertex>
9993 <*\dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links

to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertext cfg. For dviwindo, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

9994 \providecommand*\XR@ext}{dvi}
9995 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9996 \Hy@WrapperDef\hyper@anchor#1{%
9997   \Hy@SaveLastskip
9998   \Hy@VerboseAnchor{#1}%
9999   \begingroup
10000     \let\protect=\string
10001     \special{mark: #1}%
10002   \endgroup
10003   \Hy@activeanchortrue
10004   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10005   \Hy@activeanchorfalse
10006   \Hy@RestoreLastskip
10007 }
10008 \Hy@WrapperDef\hyper@anchorstart#1{%
10009   \Hy@SaveLastskip
10010   \Hy@VerboseAnchor{#1}%
10011   \special{mark: #1}%
10012   \Hy@activeanchortrue
10013 }
10014 \def\hyper@anchorend{%
10015   \Hy@activeanchorfalse
10016   \Hy@RestoreLastskip
10017 }
10018 \def\hyper@linkstart#1#2{%
10019   \Hy@VerboseLinkStart{#1}{#2}%
10020   \expandafter\Hy@colorlink\csname @#1color\endcsname
10021   \special{button: %
10022     10000000 %
10023     \number\baselineskip\space
10024     #2%
10025   }%
10026 }
10027 \def\hyper@linkend{%
10028   \Hy@endcolorlink
10029 }
10030 \def\hyper@link#1#2#3{%
10031   \Hy@VerboseLinkStart{#1}{#2}%
10032   \leavevmode
10033   \ifHy@raiselinks
10034     \Hy@SaveSpaceFactor
10035     \Hy@SaveSavedSpaceFactor
10036     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10037     \Hy@RestoreSavedSpaceFactor
10038     \@linkdim\dp\@tempboxa
10039     \lower\@linkdim\hbox{%

```

```

10040 \special{button: %
10041 \number\wd\@tempboxa\space
10042 \number\ht\@tempboxa\space
10043 #2%
10044 }%
10045 \expandafter\Hy@colorlink\csname @#1color\endcsname
10046 \Hy@RestoreSpaceFactor
10047 #3\Hy@xspace@end
10048 \Hy@SaveSpaceFactor
10049 \Hy@endcolorlink
10050 }%
10051 \@linkdim\ht\@tempboxa
10052 \advance\@linkdim by -6.5\p@
10053 \raise\@linkdim\hbox{}%
10054 \Hy@RestoreSpaceFactor
10055 \else
10056 \special{button: %
10057 \number\wd\@tempboxa\space
10058 \number\ht\@tempboxa\space
10059 #2%
10060 }%
10061 \expandafter\Hy@colorlink\csname @#1color\endcsname
10062 #3\Hy@xspace@end
10063 \Hy@endcolorlink
10064 \fi
10065 }
10066 \def\hyper@linkurl#1#2{%
10067 \begingroup
10068 \hyper@chars
10069 \leavevmode
10070 \ifHy@raiselinks
10071 \Hy@SaveSpaceFactor
10072 \Hy@SaveSavedSpaceFactor
10073 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10074 \Hy@RestoreSavedSpaceFactor
10075 \@linkdim\dp\@tempboxa
10076 \lower\@linkdim\hbox{%
10077 \special{button: %
10078 \number\wd\@tempboxa\space
10079 \number\ht\@tempboxa\space
10080 launch: \wwwbrowser\space
10081 #2%
10082 }%
10083 \Hy@colorlink\@urlcolor
10084 \Hy@RestoreSpaceFactor
10085 #1\Hy@xspace@end
10086 \Hy@SaveSpaceFactor
10087 \Hy@endcolorlink
10088 }%
10089 \@linkdim\ht\@tempboxa
10090 \advance\@linkdim by -6.5\p@
10091 \raise\@linkdim\hbox{}%
10092 \Hy@RestoreSpaceFactor
10093 \else

```

```

10094 \special{button: %
10095 \number\wd\@tempboxa\space
10096 \number\ht\@tempboxa\space
10097 launch: \wwwbrowser\space
10098 #2%
10099 }%
10100 \Hy@colorlink\@urlcolor
10101 #1\Hy@xspace@end
10102 \Hy@endcolorlink
10103 \fi
10104 \endgroup
10105 }
10106 \def\hyper@linkfile#1#2#3{%
10107 \begingroup
10108 \hyper@chars
10109 \leavevmode
10110 \ifHy@raiselinks
10111 \Hy@SaveSpaceFactor
10112 \Hy@SaveSavedSpaceFactor
10113 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10114 \Hy@RestoreSavedSpaceFactor
10115 \@linkdim\dp\@tempboxa
10116 \lower\@linkdim\hbox{%
10117 \special{button: %
10118 \number\wd\@tempboxa\space
10119 \number\ht\@tempboxa\space
10120 #3,%
10121 file: #2%
10122 }%
10123 \Hy@colorlink\@filecolor
10124 \Hy@RestoreSpaceFactor
10125 #1\Hy@xspace@end
10126 \Hy@SaveSpaceFactor
10127 \Hy@endcolorlink
10128 }%
10129 \@linkdim\ht\@tempboxa
10130 \advance\@linkdim by -6.5\p@
10131 \raise\@linkdim\hbox{}}%
10132 \Hy@RestoreSpaceFactor
10133 \else
10134 \special{button: %
10135 \number\wd\@tempboxa\space
10136 \number\ht\@tempboxa\space
10137 #3,%
10138 file: #2%
10139 }%
10140 \Hy@colorlink\@filecolor
10141 #1\Hy@xspace@end
10142 \Hy@endcolorlink
10143 \fi
10144 \endgroup
10145 }
10146 \HyInfo@AddonUnsupportedtrue
10147 \def\PDF@FinishDoc{%

```



```

10148 \Hy@UseMaketitleInfos
10149 \HyInfo@TrappedUnsupported
10150 \special{PDF: Keywords \@pdfkeywords}%
10151 \special{PDF: Title \@pdftitle}%
10152 \special{PDF: Creator \@pdfcreator}%
10153 \ifx\@pdfcreationdate\@empty
10154 \else
10155 \special{PDF: CreationDate \@pdfcreationdate}%
10156 \fi
10157 \ifx\@pdfmoddate\@empty
10158 \else
10159 \special{PDF: ModDate \@pdfmoddate}%
10160 \fi
10161 \special{PDF: Author \@pdfauthor}%
10162 \ifx\@pdfproducer\relax
10163 \else
10164 \special{PDF: Producer \@pdfproducer}%
10165 \fi
10166 \special{PDF: Subject \@pdfsubject}%
10167 \Hy@DisableOption{pdfauthor}%
10168 \Hy@DisableOption{pdftitle}%
10169 \Hy@DisableOption{pdfsubject}%
10170 \Hy@DisableOption{pdfcreator}%
10171 \Hy@DisableOption{addtopdfcreator}%
10172 \Hy@DisableOption{pdfcreationdate}%
10173 \Hy@DisableOption{pdfcreationdate}%
10174 \Hy@DisableOption{pdfmoddate}%
10175 \Hy@DisableOption{pdfproducer}%
10176 \Hy@DisableOption{pdfkeywords}%
10177 \Hy@DisableOption{pdftrapped}%
10178 \Hy@DisableOption{pdfinfo}%
10179 }
10180 \def\PDF@SetupDoc{%
10181 \ifx\@baseurl\@empty
10182 \else
10183 \special{PDF: Base \@baseurl}%
10184 \fi
10185 \ifx\@pdfpagescrop\@empty\else
10186 \special{PDF: BBox \@pdfpagescrop}%
10187 \fi
10188 \def\Hy@temp{}%
10189 \ifx\@pdfstartpage\@empty
10190 \else
10191 \ifx\@pdfstartview\@empty
10192 \else
10193 \edef\Hy@temp{%
10194 ,Page=\@pdfstartpage
10195 ,View=\@pdfstartview
10196 }%
10197 \fi
10198 \fi
10199 \edef\Hy@temp{%
10200 \noexpand\pdfmark{%
10201 pdfmark=/DOCVIEW,%

```

```

10202     PageMode=/\@pdfpagemode
10203     \Hy@temp
10204 }%
10205 }%
10206 \Hy@temp
10207 \ifx\@pdfpagescrop\@empty
10208 \else
10209   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10210 \fi
10211 \edef\Hy@temp{%
10212   \ifHy@pdftoolbar\else /HideToolbar true\fi
10213   \ifHy@pdfmenubar\else /HideMenubar true\fi
10214   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10215   \ifHy@pdffitwindow /FitWindow true\fi
10216   \ifHy@pdfcenterwindow /CenterWindow true\fi
10217   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10218   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10219   \Hy@UseNameKey{Direction}\@pdfdirection
10220   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10221   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10222   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10223   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10224   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10225   \Hy@UseNameKey{Duplex}\@pdfduplex
10226   \ifx\@pdfpicktraybypdfsize\@empty
10227   \else
10228     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10229   \fi
10230   \ifx\@pdfprintpagerange\@empty
10231   \else
10232     /PrintPageRange[\@pdfprintpagerange]%
10233   \fi
10234   \ifx\@pdfnumcopies\@empty
10235   \else
10236     /NumCopies \@pdfnumcopies
10237   \fi
10238 }%
10239 \pdfmark{pdfmark=/PUT,%
10240   Raw={%
10241     \string{Catalog\string}<<%
10242     \ifx\Hy@temp\@empty
10243     \else
10244       /ViewerPreferences<<\Hy@temp>>%
10245     \fi
10246     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10247     \ifx\@pdflang\relax
10248     \else
10249       /Lang(\@pdflang)%
10250     \fi
10251   >>%
10252 }%
10253 }%
10254 }
10255 </dviwindo>

```

10256 $\langle *dvipdfm | xetex \rangle$

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

(x)dvipdfmx replaces destination names by numbers. This makes it impossible to link from an external document with xr-hyper, so from version 7.00j on this is suppressed with a config special.

```
10257 \special{dvipdfmx:config C 0x0010}
10258 \providecommand*\XR@ext>{pdf}
10259 \Hy@setbreaklinks{true}
10260 \def\HyPat@ObjRef{%
10261   @[^ ]+%
10262 }
10263 \newsavebox{\pdfm@box}
10264 \def\@pdfm@mark#1{\special{pdf:#1}}
10265 \Hy@WrapperDef\@pdfm@dest#1{%
10266   \Hy@SaveLastskip
10267   \Hy@VerboseAnchor{#1}%
10268   \begingroup
10269     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10270     \def\x{XYZ}%
10271     \ifx\x\@pdfview
10272       \def\x{XYZ @xpos @ypos null}%
10273     \else
10274       \def\x{FitH}%
10275       \ifx\x\@pdfview
10276         \def\x{FitH @ypos}%
10277       \else
10278         \def\x{FitBH}%
10279         \ifx\x\@pdfview
10280           \def\x{FitBH @ypos}%
10281         \else
10282           \def\x{FitV}%
10283           \ifx\x\@pdfview
10284             \def\x{FitV @xpos}%
10285           \else
10286             \def\x{FitBV}%
10287             \ifx\x\@pdfview
10288               \def\x{FitBV @xpos}%
10289             \else
10290               \def\x{Fit}%
10291               \ifx\x\@pdfview
10292                 \let\x\@pdfview
10293               \else
10294                 \def\x{FitB}%
10295                 \ifx\x\@pdfview
10296                   \let\x\@pdfview
10297                 \else
10298                   \def\x{FitR}%
10299                   \ifx\x\@pdfview
10300                     \Hy@Warning{\`pdfview=FitR' is not supported}%
10301                   \def\x{XYZ @xpos @ypos null}%

```

```

10302         \else
10303         \@onelevel@sanitize\@pdfview
10304         \Hy@Warning{%
10305             Unknown value `\'@pdfview' for pdfview%
10306         }%
10307         \def\x{XYZ @xpos @ypos null}%
10308     \fi
10309 \fi
10310 \fi
10311 \fi
10312 \fi
10313 \fi
10314 \fi
10315 \fi
10316 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10317 \endgroup
10318 \Hy@RestoreLastskip
10319 }
10320 \providecommand*\@pdfview{XYZ}
10321 \providecommand*\@pdfborder{0 0 1}
10322 \providecommand*\@pdfborderstyle{}
10323 \def\hyper@anchor#1{%
10324     \@pdfm@dest{#1}%
10325 }
10326 \def\hyper@anchorstart#1{%
10327     \Hy@activeanchortrue
10328     \@pdfm@dest{#1}%
10329 }
10330 \def\hyper@anchorend{%
10331     \Hy@activeanchorfalse
10332 }
10333 \newcounter{Hy@AnnotLevel}
10334 \ifHy@ocgcolorlinks
10335     \def\OBJ@OCG@view{@OCG@view}%
10336     \@pdfm@mark{%
10337         obj \OBJ@OCG@view <<%
10338         /Type/OCG%
10339         /Name(View)%
10340         /Usage<<%
10341         /Print<<%
10342         /PrintState/OFF%
10343         >>%
10344         /View<<%
10345         /ViewState/ON%
10346         >>%
10347         >>%
10348         >>%
10349     }%
10350     \@pdfm@mark{close \OBJ@OCG@view}%
10351     \def\OBJ@OCG@print{@OCG@print}%
10352     \@pdfm@mark{%
10353         obj \OBJ@OCG@print <<%
10354         /Type/OCG%

```

```

10355     /Name(Print)%
10356     /Usage<<%
10357     /Print<<%
10358     /PrintState/ON%
10359     >>%
10360     /View<<%
10361     /ViewState/OFF%
10362     >>%
10363     >>%
10364     >>%
10365 }%
10366 \@pdfm@mark{close \OBJ@OCG@print}%
10367 \def\OBJ@OCGs{\@OCGs}%
10368 \@pdfm@mark{%
10369     obj \OBJ@OCGs [%
10370         \OBJ@OCG@view\space\OBJ@OCG@print
10371     ]%
10372 }%
10373 \@pdfm@mark{close \OBJ@OCGs}%
10374 \@pdfm@mark{%
10375     put @catalog <<%
10376     /OCProperties<<%
10377     /OCGs \OBJ@OCGs
10378     /D<<%
10379     /OFF[\OBJ@OCG@print]%
10380     /AS[%
10381         <<%
10382         /Event/View%
10383         /OCGs \OBJ@OCGs
10384         /Category[/View]%
10385         >>%
10386         <<%
10387         /Event/Print%
10388         /OCGs \OBJ@OCGs
10389         /Category[/Print]%
10390         >>%
10391         <<%
10392         /Event/Export%
10393         /OCGs \OBJ@OCGs
10394         /Category[/Print]%
10395         >>%
10396     ]%
10397     >>%
10398     >>%
10399     >>%
10400 }%
10401 \AtBeginShipout{%
10402     \setbox\AtBeginShipoutBox=\hbox{%
10403         \copy\AtBeginShipoutBox
10404         \@pdfm@mark{%
10405             put @resources <<%
10406             /Properties<<%
10407             /OCView \OBJ@OCG@view
10408             /OCPrint \OBJ@OCG@print

```

```

10409     >>%
10410     >>%
10411     }%
10412     }%
10413 }%
10414 \Hy@AtBeginDocument{%
10415   \def\Hy@colorlink#1{%
10416     \begingroup
10417     \ifHy@ocgcolorlinks
10418       \def\Hy@ocgcolor{#1}%
10419       \setbox0=\hbox\bgroup\color@begingroup
10420     \else
10421       \HyColor@UseColor#1%
10422     \fi
10423   }%
10424   \def\Hy@endcolorlink{%
10425     \ifHy@ocgcolorlinks
10426       \color@endgroup\egroup
10427     \mbox{%
10428       \@pdfm@mark{content /OC/OCPrint BDC}%
10429       \rlap{\copy0}%
10430       \@pdfm@mark{content EMC/OC/OCView BDC}%
10431     \begingroup
10432       \expandafter\HyColor@UseColor\Hy@ocgcolor
10433       \box0 %
10434     \endgroup
10435     \@pdfm@mark{content EMC}%
10436   }%
10437   \fi
10438   \endgroup
10439 }%
10440 }%
10441 \else
10442   \Hy@DisableOption{ocgcolorlinks}%
10443 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10444 \def\Hy@BeginAnnot#1{%
10445   \global\advance\c@Hy@AnnotLevel\@ne
10446   \ifnum\c@Hy@AnnotLevel=\@ne
10447     #1%
10448   \fi
10449 }
10450 \def\Hy@endAnnot{%
10451   \ifnum\value{Hy@AnnotLevel}=\@ne
10452     \Hy@endcolorlink
10453     \@pdfm@mark{eann}%
10454   \fi
10455   \global\advance\c@Hy@AnnotLevel\m@ne
10456 }
10457 \def\Hy@undefinedname{UNDEFINED}
10458 \def\hyper@linkstart#1#2{%
10459   \Hy@VerboseLinkStart{#1}{#2}%

```

```

10460 \leavevmode
10461 \Hy@BeginAnnot{%
10462   \protected@edef\Hy@testname{#2}%
10463   \ifx\Hy@testname\@empty
10464     \Hy@Warning{%
10465       Empty destination name,\MessageBreak
10466       using ``\Hy@undefinedname'%
10467     }%
10468     \let\Hy@testname\Hy@undefinedname
10469   \else
10470     \Hy@pstringdef\Hy@testname{%
10471       \expandafter\HyperDestNameFilter\expandafter{%
10472         \Hy@testname
10473       }%
10474     }%
10475   \fi
10476   \@pdfm@mark{%
10477     bann<<%
10478     /Type/Annot%
10479     /Subtype/Link%
10480     \ifHy@pdfa /F 4\fi
10481     \Hy@setpdfborder
10482     \Hy@setpdfhighlight
10483     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10484     \else
10485       /C[\csname @#1bordercolor\endcsname]%
10486     \fi
10487     /A<<%
10488     /S/GoTo%
10489     /D(\Hy@testname)%
10490     \Hy@href@nextactionraw
10491     >>%
10492     >>%
10493   }%
10494   \expandafter\Hy@colorlink\csname @#1color\endcsname
10495 }%
10496 }
10497 \def\hyper@linkend{\Hy@EndAnnot}%
10498 \def\hyper@link#1#2#3{%
10499   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10500 }
10501 \def\hyper@linkfile#1#2#3{%
10502   \leavevmode
10503   \Hy@BeginAnnot{%
10504     \def\Hy@pstringF{#2}%
10505     \Hy@CleanupFile\Hy@pstringF
10506     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10507     \Hy@pstringdef\Hy@pstringD{#3}%
10508     \Hy@MakeRemoteAction
10509     \@pdfm@mark{%
10510       bann<<%
10511       /Type/Annot%
10512       /Subtype/Link%
10513       \ifHy@pdfa /F 4\fi

```

```

10514 \Hy@setpdfborder
10515 \Hy@setpdfhighlight
10516 \ifx\@filebordercolor\relax
10517 \else
10518 /C[\@filebordercolor]%
10519 \fi
10520 /A<<%
10521 /S/GoToR%
10522 /F(\Hy@pstringF)%
10523 /D%
10524 \ifx\#3\%
10525 [\Hy@href@page\@pdfremotestartview]%
10526 \else
10527 (\Hy@pstringD)%
10528 \fi
10529 \Hy@SetNewWindow
10530 \Hy@href@nextactionraw
10531 >>%
10532 >>%
10533 }%
10534 \Hy@colorlink\@filecolor
10535 }%
10536 #1\Hy@xspace@end
10537 \Hy@endAnnot
10538 }
10539 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10540 \leavevmode
10541 \Hy@BeginAnnot{%
10542 \Hy@pstringdef\Hy@pstringF{#1}%
10543 \Hy@pstringdef\Hy@pstringP{#3}%
10544 \@pdfm@mark{%
10545 bann<<%
10546 /Type/Annot%
10547 /Subtype/Link%
10548 \ifHy@pdfa /F 4\fi
10549 \Hy@setpdfborder
10550 \Hy@setpdfhighlight
10551 \ifx\@runbordercolor\relax
10552 \else
10553 /C[\@runbordercolor]%
10554 \fi
10555 /A<<%
10556 /F(\Hy@pstringF)%
10557 /S/Launch%
10558 \Hy@SetNewWindow
10559 \ifx\#3\%
10560 \else
10561 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10562 \fi
10563 \Hy@href@nextactionraw
10564 >>%
10565 >>%
10566 }%
10567 \Hy@colorlink\@runcolor

```



```

10568 }%
10569 #2\Hy@xspace@end
10570 \Hy@EndAnnot
10571 }
10572 \def\hyper@linkurl#1#2{%
10573 \leavevmode
10574 \Hy@BeginAnnot{%
10575 \Hy@pstringdef\Hy@pstringURI{#2}%
10576 \@pdfm@mark{%
10577 bann<<%
10578 /Type/Annot%
10579 /Subtype/Link%
10580 \ifHy@pdfa /F 4\fi
10581 \Hy@setpdfborder
10582 \Hy@setpdfhighlight
10583 \ifx\@urlbordercolor\relax
10584 \else
10585 /C[\@urlbordercolor]%
10586 \fi
10587 /A<<%
10588 /S/URI%
10589 /URI(\Hy@pstringURI)%
10590 \ifHy@href@ismap
10591 /IsMap true%
10592 \fi
10593 \Hy@href@nextactionraw
10594 >>%
10595 >>%
10596 }%
10597 \Hy@colorlink\@urlcolor
10598 }%
10599 #1\Hy@xspace@end
10600 \Hy@EndAnnot
10601 }
10602 \def\Acrobatmenu#1#2{%
10603 \Hy@Acrobatmenu{#1}{#2}{%
10604 \Hy@BeginAnnot{%
10605 \EdefEscapeName\Hy@temp@menu{#1}%
10606 \@pdfm@mark{%
10607 bann<<%
10608 /Type/Annot%
10609 /Subtype/Link%
10610 \ifHy@pdfa /F 4\fi
10611 \Hy@setpdfborder
10612 \Hy@setpdfhighlight
10613 \ifx\@menubordercolor\relax
10614 \else
10615 /C[\@menubordercolor]%
10616 \fi
10617 /A<<%
10618 /S/Named%
10619 /N/\Hy@temp@menu
10620 \Hy@href@nextactionraw
10621 >>%

```

```

10622     >>%
10623 }%
10624 \Hy@colorlink\@menucolor
10625 }%
10626 #2\Hy@xspace@end
10627 \Hy@endAnnot
10628 }%
10629 }
10630
10631 \def\PDF@FinishDoc{%
10632 \Hy@UseMaketitleInfos
10633 \Hy@Info@GenerateAddons
10634 \@pdfm@mark{%
10635 docinfo<<%
10636 /Title(\@pdftitle)%
10637 /Subject(\@pdfsubject)%
10638 /Creator(\@pdfcreator)%
10639 \ifx\@pdfcreationdate\@empty
10640 \else
10641 /CreationDate(\@pdfcreationdate)%
10642 \fi
10643 \ifx\@pdfmoddate\@empty
10644 \else
10645 /ModDate(\@pdfmoddate)%
10646 \fi
10647 /Author(\@pdfauthor)%
10648 \ifx\@pdfproducer\relax
10649 \else
10650 /Producer(\@pdfproducer)%
10651 \fi
10652 /Keywords(\@pdfkeywords)%
10653 \ifx\@pdftrapped\@empty
10654 \else
10655 /Trapped/\@pdftrapped
10656 \fi
10657 \Hy@Info@Addons
10658 >>%
10659 }%
10660 \Hy@DisableOption{pdfauthor}%
10661 \Hy@DisableOption{pdftitle}%
10662 \Hy@DisableOption{pdfsubject}%
10663 \Hy@DisableOption{pdfcreator}%
10664 \Hy@DisableOption{addtopdfcreator}%
10665 \Hy@DisableOption{pdfcreationdate}%
10666 \Hy@DisableOption{pdfcreationdate}%
10667 \Hy@DisableOption{pdfmoddate}%
10668 \Hy@DisableOption{pdfproducer}%
10669 \Hy@DisableOption{pdfkeywords}%
10670 \Hy@DisableOption{pdftrapped}%
10671 \Hy@DisableOption{pdfinfo}%
10672 }
10673 \def\PDF@SetupDoc{%
10674 \edef\Hy@temp{%
10675 \ifHy@pdftoolbar\else /HideToolbar true\fi

```

```

10676 \ifHy@pdfmenubar\else /HideMenubar true\fi
10677 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10678 \ifHy@pdfwindow /FitWindow true\fi
10679 \ifHy@pdfcenterwindow /CenterWindow true\fi
10680 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10681 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10682 \Hy@UseNameKey{Direction}\@pdfdirection
10683 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10684 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10685 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10686 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10687 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10688 \Hy@UseNameKey{Duplex}\@pdfduplex
10689 \ifx\@pdfpicktraybypdfsize\@empty
10690 \else
10691 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10692 \fi
10693 \ifx\@pdfprintpagerange\@empty
10694 \else
10695 /PrintPageRange[\@pdfprintpagerange]%
10696 \fi
10697 \ifx\@pdfnumcopies\@empty
10698 \else
10699 /NumCopies \@pdfnumcopies
10700 \fi
10701 }%
10702 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10703 \@pdfm@mark{%
10704 docview<<%
10705 \ifx\@pdfstartpage\@empty
10706 \else
10707 \ifx\@pdfstartview\@empty
10708 \else
10709 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10710 \fi
10711 \fi
10712 \ifx\@baseurl\@empty
10713 \else
10714 /URI<</Base(\Hy@pstringB)>>%
10715 \fi
10716 /PageMode/\@pdfpagemode
10717 \ifx\Hy@temp\@empty
10718 \else
10719 /ViewerPreferences<<\Hy@temp>>%
10720 \fi
10721 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10722 \ifx\@pdflang\relax
10723 \else
10724 /Lang(\@pdflang)%
10725 \fi
10726 >>%
10727 }%
10728 \ifx\@pdfpagescrop\@empty
10729 \else

```

```

10730 \pdfmark{put @pages <</CropBox[\pdfpagescrop]>>}}%
10731 \fi
10732 }
10733 </dvipdfm | xetex>
10734 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10735 \def\hyper@pagetransition{%
10736 \ifx\pdfpagetransition\relax
10737 \else
10738 \ifx\pdfpagetransition\empty
10739 \else
10740 \special{pdf:put @thispage %
10741 <</Trans<</S/\pdfpagetransition>>>>%
10742 }%
10743 \fi
10744 \fi
10745 }

```

\hyper@pageduration

```

10746 \def\hyper@pageduration{%
10747 \ifx\pdfpageduration\relax
10748 \else
10749 \ifx\pdfpageduration\empty
10750 \else
10751 \special{pdf:put @thispage %
10752 <</Dur \pdfpageduration>>>%
10753 }%
10754 \fi
10755 \fi
10756 }

10757 \g@addto@macro\Hy@EveryPageBoxHook{%
10758 \hyper@pagetransition
10759 \hyper@pageduration
10760 }

10761 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10762 < *dvipdfm>
10763 \AtBeginShipoutFirst{%
10764 \ifHy@setpagesize
10765 \begingroup
10766 \@ifundefined{stockwidth}{%
10767 \ifdim\paperwidth>\z@
10768 \ifdim\paperheight>\z@
10769 \special{papersize=\the\paperwidth,\the\paperheight}%
10770 \fi
10771 \fi
10772 }{%
10773 \ifdim\stockwidth>\z@
10774 \ifdim\stockheight>\z@

```

```

10775         \special{papersize=\the\stockwidth,\the\stockheight}%
10776         \fi
10777     \fi
10778 }%
10779 \endgroup
10780 \fi
10781 \Hy@DisableOption{setpagesize}%
10782 }
10783 </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.

```

10784 <*vtexhtml>
10785 \providecommand*\XR@ext\{htm}
10786 \RequirePackage{vtexhtml}
10787 \newif\if@Localurl
10788 \let\PDF@FinishDoc\ltx@empty
10789 \def\PDF@SetupDoc{%
10790   \ifx\@baseurl\@empty
10791   \else
10792     \special{!direct <base href="\@baseurl">}%
10793   \fi
10794 }
10795 \def\@urltype{url}
10796 \def\hyper@link#1#2#3{%
10797   \Hy@VerboseLinkStart{#1}{#2}%
10798   \leavevmode
10799   \special{!direct <a href=%
10800     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10801   #3\Hy@xspace@end
10802   \special{!direct </a>}%
10803 }
10804 \def\hyper@linkurl#1#2{%
10805   \begingroup
10806   \hyper@chars
10807   \leavevmode
10808   \MathBSuppress=1\relax
10809   \special{!direct <a href=%
10810     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10811   #1\Hy@xspace@end
10812   \MathBSuppress=0\relax
10813   \special{!direct </a>}%
10814   \endgroup
10815 }
10816 \def\hyper@linkfile#1#2#3{%
10817   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10818 }
10819 \def\hyper@linkstart#1#2{%
10820   \Hy@VerboseLinkStart{#1}{#2}%
10821   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10822     \@Localurltrue
10823     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%

```

```

10824 \else
10825 \@@Localurlfalse
10826 \begingroup
10827 \hyper@chars
10828 \special{!aref \HyperDestNameFilter{#2}}}%
10829 \endgroup
10830 \fi
10831 }
10832 \def\hyper@linkend{%
10833 \if@Localurl
10834 \special{!endaref}%
10835 \else
10836 \special{!direct </a>}}%
10837 \fi
10838 }
10839 \Hy@WrapperDef\hyper@anchorstart#1{%
10840 \Hy@SaveLastskip
10841 \Hy@VerboseAnchor{#1}%
10842 \begingroup
10843 \hyper@chars
10844 \special{!aname #1}%
10845 \special{!direct <a name=%
10846 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
10847 \endgroup
10848 \Hy@activeanchortrue
10849 }
10850 \def\hyper@anchorend{%
10851 \special{!direct </a>}}%
10852 \Hy@activeanchorfalse
10853 \Hy@RestoreLastskip
10854 }
10855 \Hy@WrapperDef\hyper@anchor#1{%
10856 \Hy@SaveLastskip
10857 \Hy@VerboseAnchor{#1}%
10858 \begingroup
10859 \let\protect=\string
10860 \hyper@chars
10861 \leavevmode
10862 \special{!aname #1}%
10863 \special{!direct <a name=%
10864 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
10865 \endgroup
10866 \Hy@activeanchortrue
10867 \bgroup\anchor@spot\egroup
10868 \special{!direct </a>}}%
10869 \Hy@activeanchorfalse
10870 \Hy@RestoreLastskip
10871 }
10872 \def\@Form[#1]{%
10873 \Hy@Message{Sorry, TeXpider does not yet support FORMs}}%
10874 }
10875 \let\@endForm\ltx@empty
10876 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10877 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}}%

```

```

10878 }
10879 \def\@TextField[#1]#2{% parameters, label
10880 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10881 }
10882 \def\@CheckBox[#1]#2{% parameters, label
10883 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10884 }
10885 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10886 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10887 }
10888 \def\@PushButton[#1]#2{% parameters, label
10889 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10890 }
10891 \def\@Reset[#1]#2{%
10892 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10893 }
10894 \def\@Submit[#1]#2{%
10895 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10896 }
10897 \</vtexhtml>
10898 \*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.

```

10899 \ifx\mediaheight\@undefined
10900 \else
10901 \ifx\mediaheight\relax
10902 \else
10903 \ifHy@setpagesize
10904 \providecommand*\VTeXInitMediaSize{%
10905 \ltx@ifundefined{stockwidth}{%
10906 \ifdim\paperheight>0pt %
10907 \setlength\mediaheight\paperheight
10908 \fi
10909 \ifdim\paperheight>0pt %
10910 \setlength\mediawidth\paperwidth
10911 \fi
10912 }{%
10913 \ifdim\stockheight>0pt %
10914 \setlength\mediaheight\stockheight
10915 \fi
10916 \ifdim\stockwidth>0pt %
10917 \setlength\mediawidth\stockwidth
10918 \fi
10919 }%
10920 }%
10921 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10922 \fi
10923 \Hy@DisableOption{setpagesize}%
10924 \fi
10925 \fi

```

Older versions of VTeX require xyz in lower case.

```

10926 \providecommand*\@pdfview{xyz}
10927 \providecommand*\@pdfborder{0 0 1}
10928 \providecommand*\@pdfborderstyle{}
10929 \let\CurrentBorderColor\@linkbordercolor
10930 \Hy@WrapperDef\hyper@anchor#1{%
10931   \Hy@SaveLastskip
10932   \Hy@VerboseAnchor{#1}%
10933   \begingroup
10934     \let\protect=\string
10935     \hyper@chars
10936     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10937   \endgroup
10938   \Hy@activeanchortrue
10939   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10940   \Hy@activeanchorfalse
10941   \Hy@RestoreLastskip
10942 }
10943 \Hy@WrapperDef\hyper@anchorstart#1{%
10944   \Hy@SaveLastskip
10945   \Hy@VerboseAnchor{#1}%
10946   \begingroup
10947     \hyper@chars
10948     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10949   \endgroup
10950   \Hy@activeanchortrue
10951 }
10952 \def\hyper@anchorend{%
10953   \Hy@activeanchorfalse
10954   \Hy@RestoreLastskip
10955 }
10956 \def\@urltype{url}
10957 \def\Hy@undefinedname{UNDEFINED}
10958 \def\hyper@linkstart#1#2{%
10959   \Hy@VerboseLinkStart{#1}{#2}%
10960   \Hy@pstringdef\Hy@pstringURI{#2}%
10961   \expandafter\Hy@colorlink\csname @#1color\endcsname
10962   \ltx@ifundefined{@#1bordercolor}{%
10963     \let\CurrentBorderColor\relax
10964   }{%
10965     \edef\CurrentBorderColor{%
10966       \csname @#1bordercolor\endcsname
10967     }%
10968   }%
10969   \def\Hy@tempa{#1}%
10970   \ifx\Hy@tempa\@urltype
10971     \special{!%
10972       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10973       \ifHy@href@ismap
10974         /IsMap true%
10975       \fi
10976       \Hy@href@nextactionraw
10977       >,%
10978       a=<%
10979       \ifHy@pdfa /F 4\fi

```



```

10980     \Hy@setpdfborder
10981     \ifx\CurrentBorderColor\relax
10982     \else
10983     /C [\CurrentBorderColor]%
10984     \fi
10985     >%
10986     }%
10987 \else
10988 \protected@edef\Hy@testname{#2}%
10989 \ifx\Hy@testname\@empty
10990 \Hy@Warning{%
10991     Empty destination name,\MessageBreak
10992     using `\'Hy@undefinedname'%
10993     }%
10994 \let\Hy@testname\Hy@undefinedname
10995 \fi
10996 \special{!%
10997     aref \expandafter\HyperDestNameFilter
10998     \expandafter{\Hy@testname};%
10999     a=<%
11000     \ifHy@pdfa /F 4\fi
11001     \Hy@setpdfborder
11002     \ifx\CurrentBorderColor\relax
11003     \else
11004     /C [\CurrentBorderColor]%
11005     \fi
11006     >%
11007     }%
11008 \fi
11009 }
11010 \def\hyper@linkend{%
11011 \special{!endaref}%
11012 \Hy@endcolorlink
11013 }
11014 \def\hyper@linkfile#1#2#3{%
11015 \leavevmode
11016 \def\Hy@pstringF{#2}%
11017 \Hy@CleanupFile\Hy@pstringF
11018 \special{!%
11019     aref <%
11020     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11021     f=\Hy@pstringF>#3;%
11022     a=<%
11023     \ifHy@pdfa /F 4\fi
11024     \Hy@setpdfborder
11025     \ifx\@filebordercolor\relax
11026     \else
11027     /C [\@filebordercolor]%
11028     \fi
11029     >%
11030     }%
11031 \Hy@colorlink\@filecolor
11032 #1\Hy@xspace@end
11033 \Hy@endcolorlink

```

```

11034 \special{!endaref}%
11035 }
11036 \def\hyper@linkurl#1#2{%
11037 \begingroup
11038 \Hy@pstringdef\Hy@pstringURI{#2}%
11039 \hyper@chars
11040 \leavevmode
11041 \special{!%
11042   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11043   \ifHy@href@ismap
11044     /IsMap true%
11045   \fi
11046   \Hy@href@nextactionraw
11047   >,%
11048   a=<%
11049   \ifHy@pdfa /F 4\fi
11050   \Hy@setpdfborder
11051   \ifx\@urlbordercolor\relax
11052   \else
11053     /C [\@urlbordercolor]%
11054   \fi
11055   >%
11056   }%
11057   \Hy@colorlink\@urlcolor
11058   #1\Hy@xspace@end
11059   \Hy@endcolorlink
11060   \special{!endaref}%
11061 \endgroup
11062 }
11063 \def\hyper@link#1#2#3{%
11064 \Hy@VerboseLinkStart{#1}{#2}%
11065 \ltx@ifundefined{#@#1bordercolor}{%
11066 \let\CurrentBorderColor\relax
11067 }{%
11068 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11069 }%
11070 \leavevmode
11071 \protected@edef\Hy@testname{#2}%
11072 \ifx\Hy@testname\@empty
11073 \Hy@Warning{%
11074   Empty destination name,\MessageBreak
11075   using ``\Hy@undefinedname'%
11076 }%
11077 \let\Hy@testname\Hy@undefinedname
11078 \fi
11079 \special{!%
11080   aref \expandafter\HyperDestNameFilter
11081   \expandafter{\Hy@testname};%
11082   a=<%
11083   \ifHy@pdfa /F 4\fi
11084   \Hy@setpdfborder
11085   \ifx\CurrentBorderColor\relax
11086   \else
11087     /C [\CurrentBorderColor]%

```

```

11088 \fi
11089 >%
11090 }%
11091 \expandafter
11092 \Hy@colorlink\csname @#1color\endcsname
11093 #3\Hy@xspace@end
11094 \Hy@endcolorlink
11095 \special{!endaref}%
11096 }
11097 \def\hyper@image#1#2{%
11098 \hyper@linkurl{#2}{#1}%
11099 }
11100 \def\@hyper@launch run:#1\#2#3{%
11101 \Hy@pstringdef\Hy@pstringF{#1}%
11102 \Hy@pstringdef\Hy@pstringP{#3}%
11103 \leavevmode
11104 \special{!aref %
11105 <u=%
11106 /Type/Action%
11107 /S/Launch%
11108 /F(\Hy@pstringF)%
11109 \Hy@SetNewWindow
11110 \ifx\#3\%
11111 \else
11112 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11113 \fi
11114 \Hy@href@nextactionraw
11115 >:%
11116 a=<%
11117 \ifHy@pdfa /F 4\fi
11118 \Hy@setpdfborder
11119 \ifx\@runbordercolor\relax
11120 \else
11121 /C[\@runbordercolor]%
11122 \fi
11123 >%
11124 }%
11125 \Hy@colorlink\@runcolor
11126 #2\Hy@xspace@end
11127 \Hy@endcolorlink
11128 \special{!endaref}%
11129 }
11130 \def\Acrobatmenu#1#2{%
11131 \EdefEscapeName\Hy@temp@menu{#1}%
11132 \Hy@Acrobatmenu{#1}{#2}{%
11133 \special{!%
11134 aref <u=/S /Named /N /\Hy@temp@menu>:%
11135 a=<%
11136 \ifHy@pdfa /F 4\fi
11137 \Hy@setpdfborder
11138 \ifx\@menubordercolor\relax
11139 \else
11140 /C[\@menubordercolor]%
11141 \fi

```

```

11142 >%
11143 }%
11144 \Hy@colorlink\@menucolor
11145 #2\Hy@xspace@end
11146 \Hy@endcolorlink
11147 \special{!endaref}%
11148 }%
11149 }

```

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{VTeXversion}{...}{...}` *globally*.

```

11150 \ifnum\Hy@VTeXversion<702 %
11151 \else
11152 \def\hyper@pagetransition{%
11153 \ifx\@pdfpagetransition\relax
11154 \else
11155 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11156 \else
11157 \hvtex@parse@trans\@pdfpagetransition
11158 \fi
11159 \fi
11160 }%

```

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:

```

11161 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11162 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11163 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11164 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11165 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11166 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11167 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11168 \def\hvtex@par@dimension{/Dm}%
11169 \def\hvtex@par@direction{/Di}%
11170 \def\hvtex@par@duration{/D}%
11171 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

11172 \def\hvtex@gettoken{%
11173   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11174 }%

```

Notice that tokens in the input buffer must be space delimited.

```

11175 \def\hvtex@gettoken@#1 #2\@nil{%
11176   \edef\hvtex@token{#1}%
11177   \edef\hvtex@buffer{#2}%
11178 }%
11179 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11180 \let\hvtex@trans@code\@empty
11181 \let\hvtex@param@dimension\@empty
11182 \let\hvtex@param@direction\@empty
11183 \let\hvtex@param@duration\@empty
11184 \let\hvtex@param@motion\@empty
11185 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11186 \hvtex@gettoken
11187 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11188 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11189 \else
11190   \hvtex@gettoken
11191 \fi
11192 \fi
11193 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11194 \hvtex@trans@params
11195 }%

```

Reentrant macro to parse optional parameters.

```

11196 \def\hvtex@trans@params{%
11197   \ifx\hvtex@buffer\@empty
11198   \else
11199     \hvtex@gettoken
11200     \let\hvtex@trans@par\hvtex@token
11201     \ifx\hvtex@buffer\@empty
11202     \else
11203       \hvtex@gettoken
11204       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

11205       \let\hvtex@param@duration\hvtex@token
11206       \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```
11207      \expandafter\edef\expandafter\hvtex@param@motion
11208      \expandafter{\expandafter\@gobble\hvtex@token}%
11209      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11210      \expandafter\edef\expandafter\hvtex@param@dimension
11211      \expandafter{\expandafter\@gobble\hvtex@token}%
11212      \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).

```
11213      \let\hvtex@param@direction\hvtex@token
11214      \fi\fi\fi\fi
11215      \fi
11216      \fi
11217      \ifx\hvtex@buffer\@empty
11218      \let\next\hvtex@produce@trans
11219      \else
11220      \let\next\hvtex@trans@params
11221      \fi
11222      \next
11223  }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
11224  \def\hvtex@produce@trans{%
11225  \let\vtex@trans@special\@empty
11226  \if S\hvtex@trans@code
11227  \edef\vtex@trans@special{\hvtex@trans@code
11228  \hvtex@param@dimension\hvtex@param@motion}%
11229  \else\if B\hvtex@trans@code
11230  \edef\vtex@trans@special{%
11231  \hvtex@trans@code\hvtex@param@dimension
11232  }%
11233  \else\if X\hvtex@trans@code
11234  \edef\vtex@trans@special{%
11235  \hvtex@trans@code\hvtex@param@motion
11236  }%
11237  \else\if W\hvtex@trans@code
11238  \edef\vtex@trans@special{%
11239  \hvtex@trans@code\hvtex@param@direction
11240  }%
11241  \else\if D\hvtex@trans@code
11242  \let\vtex@trans@special\hvtex@trans@code
11243  \else\if R\hvtex@trans@code
11244  \let\vtex@trans@special\hvtex@trans@code
11245  \else\if G\hvtex@trans@code
11246  \edef\vtex@trans@special{%
11247  \hvtex@trans@code\hvtex@param@direction
11248  }%
11249  \fi\fi\fi\fi\fi\fi
11250  \ifx\vtex@trans@special\@empty
11251  \else
11252  \ifx\hvtex@param@duration\@empty
```

```

11253 \else
11254 \setlength{\dimen@}{\hvtex@param@duration\p@}%
I'm not guilty of possible overflow.
11255 \multiply\dimen@\@m
11256 \edef\vtex@trans@special{%
11257 \vtex@trans@special,\strip@pt\dimen@
11258 }%
11259 \fi

```

And all the mess is just for this.

```

11260 \special{!trans \vtex@trans@special}%
11261 \fi
11262 }%
11263 \def\hyper@pageduration{%
11264 \ifx\@pdfpageduration\relax
11265 \else
11266 \ifx\@pdfpageduration\@empty
11267 \special{!duration-}%
11268 \else
11269 \special{!duration \@pdfpageduration}%
11270 \fi
11271 \fi
11272 }%
11273 \g@addto@macro\Hy@EveryPageBoxHook{%
11274 \hyper@pagetransition
11275 \hyper@pageduration
11276 }%
11277 \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

```

11278 \ifx\@pdfproducer\relax
11279 \def\@pdfproducer{VTeX}%
11280 \ifnum\Hy@VTeXversion>\z@
11281 \count@\VTeXversion
11282 \divide\count@ 100 %
11283 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11284 \multiply\count@ -100 %
11285 \advance\count@\VTeXversion
11286 \edef\@pdfproducer{%
11287 \@pdfproducer
11288 .\ifnum\count@<10 0\fi\the\count@
11289 \ifx\VTeXOS\@undefined\else
11290 \ifnum\VTeXOS>0 %
11291 \ifnum\VTeXOS<6 %

```

```

11292     \space(
11293     \ifcase\VTexOS
11294     \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11295     \fi
11296     )%
11297   \fi
11298 \fi
11299 \fi
11300 ,\space
11301 \ifnum\OpMode=\@ne PDF\else PS\fi
11302 \space backend%
11303 \ifx\gexmode\@undefined\else
11304 \ifnum\gexmode>\z@\space with GeX\fi
11305 \fi
11306 }%
11307 \fi
11308 \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).

```

11309 \def\PDF@SetupDoc{%
11310   \ifx\@pdfpagescrop\@empty
11311   \else
11312     \special{!pdfinfo b=<\@pdfpagescrop>}%
11313   \fi
11314   \ifx\@pdfstartpage\@empty
11315   \else
11316     \ifx\@pdfstartview\@empty
11317     \else
11318       \special{!onopen Page\@pdfstartpage}%
11319     \fi
11320   \fi
11321   \special{!pdfinfo p=</\@pdfpagemode>}%
11322   \ifx\@baseurl\@empty
11323   \else
11324     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11325   \fi
11326   \special{!pdfinfo v=<<<%
11327     \ifHy@pdftoolbar\else /HideToolbar true\fi
11328     \ifHy@pdfmenubar\else /HideMenubar true\fi
11329     \ifHy@pdfwindowui\else /HideWindowUI true\fi

```



```

11330 \ifHy@pdffitwindow /FitWindow true\fi
11331 \ifHy@pdfcenterwindow /CenterWindow true\fi
11332 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11333 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11334 \Hy@UseNameKey{Direction}\@pdfdirection
11335 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11336 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11337 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11338 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11339 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11340 \Hy@UseNameKey{Duplex}\@pdfduplex
11341 \ifx\@pdfpicktraybypdfsize\@empty
11342 \else
11343 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11344 \fi
11345 \ifx\@pdfprintpagerange\@empty
11346 \else
11347 /PrintPageRange[\@pdfprintpagerange]%
11348 \fi
11349 \ifx\@pdfnumcopies\@empty
11350 \else
11351 /NumCopies \@pdfnumcopies
11352 \fi
11353 >>>}%
11354 \ifx\@pdfpagelayout\@empty
11355 \else
11356 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11357 \fi
11358 }%
11359 \HyInfo@AddonUnsupportedtrue
11360 \define@key{Hyp}{pdfcreationdate}{%
11361 \Hy@Warning{%
11362 VTeX does not support pdfcreationdate.\MessageBreak
11363 Therefore its setting is ignored%
11364 }%
11365 }
11366 \define@key{Hyp}{pdfmoddate}{%
11367 \Hy@Warning{%
11368 VTeX does not support pdfmoddate.\MessageBreak
11369 Therefore its setting is ignored%
11370 }%
11371 }
11372 \def\PDF@FinishDoc{%
11373 \Hy@UseMaketitleInfos
11374 \HyInfo@TrappedUnsupported
11375 \special{!pdfinfo a=<\@pdfauthor>}%
11376 \special{!pdfinfo t=<\@pdftitle>}%
11377 \special{!pdfinfo s=<\@pdfsubject>}%
11378 \special{!pdfinfo c=<\@pdfcreator>}%
11379 \ifx\@pdfproducer\relax
11380 \else
11381 \special{!pdfinfo r=<\@pdfproducer>}%
11382 \fi
11383 \special{!pdfinfo k=<\@pdfkeywords>}%

```

```

11384 \Hy@DisableOption{pdfauthor}%
11385 \Hy@DisableOption{pdftitle}%
11386 \Hy@DisableOption{pdfsubject}%
11387 \Hy@DisableOption{pdfcreator}%
11388 \Hy@DisableOption{addtopdfcreator}%
11389 \Hy@DisableOption{pdfcreationdate}%
11390 \Hy@DisableOption{pdfcreationdate}%
11391 \Hy@DisableOption{pdfmoddate}%
11392 \Hy@DisableOption{pdfproducer}%
11393 \Hy@DisableOption{pdfkeywords}%
11394 \Hy@DisableOption{pdftrapped}%
11395 \Hy@DisableOption{pdfinfo}%
11396 }
11397 </vtx>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11398 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11399 <package>\providecommand*{\Hy@DistillerDestFix}{%
11400 <*pdfmark | dviwindo>
11401 \def\Hy@DistillerDestFix{%
11402 \begingroup
11403 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11404 \ifnum \@ifundefined{OpMode}{0}{%
11405 \@ifundefined{gexmode}{0}{%
11406 \ifnum\gexmode>0 \OpMode\else 0\fi
11407 }}>1 %
11408 \def\x##1{%
11409 \immediate\special{!=##1}%
11410 }%
11411 \fi
11412 \x{%
11413 /product where{%
11414 pop %
11415 product(Distiller)search{%
11416 pop pop pop %
11417 version(.)search{%
11418 exch pop exch pop%
11419 (3011)eq{%
11420 gsave %
11421 newpath 0 0 moveto closepath clip%

```

```

11422         /Courier findfont 10 scalefont setfont %
11423         72 72 moveto(.)show %
11424         grestore%
11425     }if%
11426     }{pop}ifelse%
11427     }{pop}ifelse%
11428     }if%
11429 }%
11430 \endgroup
11431 }
11432 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

```

\@pdfproducer   for document information
\literalps@out  PostScript output
\headerps@out   PostScript output that goes in the header area

```

and the correct definitions of the following PostScript procedures:

```

H.S           start of anchor, link or rect
#1 H.A        end of anchor, argument=baselineskip in pt
#1 H.L        end of link, argument=baselineskip in pt
H.R           end of rect
H.B           raw rect code

```

```

11433 <*pdfmark>
11434 \Hy@breaklinks@unsupported
11435 \def\HyPat@ObjRef{%
11436   \{[~{}]+\}%
11437 }
11438 \Hy@WrapperDef\hyper@anchor#1{%
11439   \Hy@SaveLastskip
11440   \Hy@VerboseAnchor{#1}%
11441   \begingroup
11442     \pdfmark[\anchor@spot]{%
11443       pdfmark=/DEST,%
11444       linktype=anchor,%
11445       View=/\@pdfview \@pdfviewparams,%
11446       DestAnchor={#1}%
11447     }%
11448   \endgroup
11449   \Hy@RestoreLastskip
11450 }
11451 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
11452 \Hy@WrapperDef\hyper@anchorstart#1{%
11453   \Hy@SaveLastskip
11454   \Hy@VerboseAnchor{#1}%
11455   \literalps@out{H.S}%
11456   \Hy@AllowHyphens
11457   \xdef\hyper@currentanchor{#1}%
11458   \Hy@activeanchortrue
11459 }

```

```

11460 \def\hyper@anchorend{%
11461 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11462 \pdfmark{%
11463 pdfmark=/DEST,%
11464 linktype=anchor,%
11465 View=/\@pdfview \@pdfviewparams,%
11466 DestAnchor=\hyper@currentanchor,%
11467 }%
11468 \Hy@activeanchorfalse
11469 \Hy@RestoreLastskip
11470 }
11471 \def\hyper@linkstart#1#2{%
11472 \Hy@VerboseLinkStart{#1}{#2}%
11473 \ifHy@breaklinks
11474 \else
11475 \leavevmode
11476 \ifmmode
11477 \def\Hy@LinkMath{$}%
11478 \else
11479 \let\Hy@LinkMath\ltx@empty
11480 \fi
11481 \Hy@SaveSpaceFactor
11482 \hbox\bgroup
11483 \Hy@RestoreSpaceFactor
11484 \Hy@LinkMath
11485 \fi
11486 \expandafter\Hy@colorlink\csname @#1color\endcsname
11487 \literalps@out{H.S}%
11488 \Hy@AllowHyphens
11489 \xdef\hyper@currentanchor{#2}%
11490 \gdef\hyper@currentlinktype{#1}%
11491 }
11492 \def\hyper@linkend{%
11493 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11494 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11495 \let\Hy@tempcolor\relax
11496 }{%
11497 \edef\Hy@tempcolor{%
11498 \csname @\hyper@currentlinktype bordercolor\endcsname
11499 }%
11500 }%
11501 \pdfmark{%
11502 pdfmark=/ANN,%
11503 linktype=link,%
11504 Subtype=/Link,%
11505 PDFAFlags=4,%
11506 Dest=\hyper@currentanchor,%
11507 AcroHighlight=\@pdfhighlight,%
11508 Border=\@pdfborder,%
11509 BorderStyle=\@pdfborderstyle,%
11510 Color=\Hy@tempcolor,%
11511 Raw=H.B%
11512 }%
11513 \Hy@endcolorlink

```

```

11514 \ifHy@breaklinks
11515 \else
11516 \Hy@LinkMath
11517 \Hy@SaveSpaceFactor
11518 \egroup
11519 \Hy@RestoreSpaceFactor
11520 \fi
11521 }

```

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.

```

11522 \begingroup
11523 \catcode`P=12 %
11524 \catcode`T=12 %
11525 \lowercase{\endgroup
11526 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11527 }
11528 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11529 \def\hyper@pagetransition{%
11530 \ifx\@pdfpagetransition\relax
11531 \else
11532 \ifx\@pdfpagetransition\@empty
11533 % 1. Does an old entry have to be deleted?
11534 % 2. If 1=yes, how to delete?
11535 \else
11536 \pdfmark{%
11537 pdfmark=/PUT,%
11538 Raw={%
11539 \string{ThisPage\string}%
11540 <</Trans << /S /\@pdfpagetransition\space >> >>%
11541 }%
11542 }%
11543 \fi
11544 \fi
11545 }

```

`\hyper@pageduration`

```

11546 \def\hyper@pageduration{%
11547 \ifx\@pdfpageduration\relax
11548 \else
11549 \ifx\@pdfpageduration\@empty
11550 % 1. Does an old entry have to be deleted?
11551 % 2. If 1=yes, how to delete?
11552 \else
11553 \pdfmark{%
11554 pdfmark=/PUT,%
11555 Raw={%
11556 \string{ThisPage\string}%
11557 <</Dur \@pdfpageduration>>%
11558 }%
11559 }%

```

```

11560 \fi
11561 \fi
11562 }

11563 \g@addto@macro\Hy@EveryPageBoxHook{%
11564 \hyper@pagetransition
11565 \hyper@pageduration
11566 }

11567 \def\hyper@image#1#2{%
11568 \hyper@linkurl{#2}{#1}%
11569 }
11570 \def\Hy@undefinedname{UNDEFINED}
11571 \def\hyper@link#1#2#3{%
11572 \Hy@VerboseLinkStart{#1}{#2}%
11573 \ltx@ifundefined{#1bordercolor}{%
11574 \let\Hy@tempcolor\relax
11575 }{%
11576 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11577 }%
11578 \begingroup
11579 \protected@edef\Hy@testname{#2}%
11580 \ifx\Hy@testname\@empty
11581 \Hy@Warning{%
11582 Empty destination name,\MessageBreak
11583 using \Hy@undefinedname'%
11584 }%
11585 \let\Hy@testname\Hy@undefinedname
11586 \fi
11587 \pdfmark[{#3}]{%
11588 Color=\Hy@tempcolor,%
11589 linktype={#1},%
11590 AcroHighlight=\@pdfhighlight,%
11591 Border=\@pdfborder,%
11592 BorderStyle=\@pdfborderstyle,%
11593 pdfmark=/ANN,%
11594 Subtype=/Link,%
11595 PDFAFlags=4,%
11596 Dest=\Hy@testname
11597 }%
11598 \endgroup
11599 }
11600 \newtoks\pdf@docset
11601 \def\PDF@FinishDoc{%
11602 \Hy@UseMaketitleInfos
11603 \Hy@Info@GenerateAddons
11604 \let\Hy@temp\@empty
11605 \ifx\@pdfcreationdate\@empty
11606 \else
11607 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11608 \fi
11609 \ifx\@pdfmoddate\@empty
11610 \else
11611 \expandafter\def\expandafter\Hy@temp\expandafter{%
11612 \Hy@temp

```

```

11613     ModDate=\@pdfmoddate,%
11614 }%
11615 \fi
11616 \ifx\@pdfproducer\relax
11617 \else
11618   \expandafter\def\expandafter\Hy@temp\expandafter{%
11619     \Hy@temp
11620     Producer=\@pdfproducer,%
11621   }%
11622 \fi
11623 \expandafter
11624 \pdfmark\expandafter{%
11625   \Hy@temp
11626   pdfmark=/DOCINFO,%
11627   Title=\@pdftitle,%
11628   Subject=\@pdfsubject,%
11629   Creator=\@pdfcreator,%
11630   Author=\@pdfauthor,%
11631   Keywords=\@pdfkeywords,%
11632   Trapped=\@pdftrapped
11633 }%
11634 \ifx\HyInfo@Addons\@empty
11635 \else
11636   \pdfmark{%
11637     pdfmark=/DOCINFO,%
11638     Raw={\HyInfo@Addons}%
11639   }%
11640 \fi
11641 \Hy@DisableOption{pdfauthor}%
11642 \Hy@DisableOption{pdftitle}%
11643 \Hy@DisableOption{pdfsubject}%
11644 \Hy@DisableOption{pdfcreator}%
11645 \Hy@DisableOption{addtopdfcreator}%
11646 \Hy@DisableOption{pdfcreationdate}%
11647 \Hy@DisableOption{pdfcreationdate}%
11648 \Hy@DisableOption{pdfmoddate}%
11649 \Hy@DisableOption{pdfproducer}%
11650 \Hy@DisableOption{pdfkeywords}%
11651 \Hy@DisableOption{pdftrapped}%
11652 \Hy@DisableOption{pdfinfo}%
11653 }
11654 \def\PDF@SetupDoc{%
11655   \def\Hy@temp{}%
11656   \ifx\@pdfstartpage\@empty
11657   \else
11658     \ifx\@pdfstartview\@empty
11659     \else
11660       \edef\Hy@temp{%
11661         ,Page=\@pdfstartpage
11662         ,View=\@pdfstartview
11663       }%
11664     \fi
11665   \fi
11666   \edef\Hy@temp{%

```

```

11667 \noexpand\pdfmark{%
11668 pdfmark=/DOCVIEW,%
11669 PageMode=/\@pdfpagemode
11670 \Hy@temp
11671 }%
11672 }%
11673 \Hy@temp
11674 \ifx\@pdfpagescrop\@empty
11675 \else
11676 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11677 \fi
11678 \edef\Hy@temp{%
11679 \ifHy@pdftoolbar\else /HideToolbar true\fi
11680 \ifHy@pdfmenubar\else /HideMenubar true\fi
11681 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11682 \ifHy@pdfitwindow /FitWindow true\fi
11683 \ifHy@pdfcenterwindow /CenterWindow true\fi
11684 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11685 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11686 \Hy@UseNameKey{Direction}\@pdfdirection
11687 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11688 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11689 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11690 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11691 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11692 \Hy@UseNameKey{Duplex}\@pdfduplex
11693 \ifx\@pdfpicktraybypdfsize\@empty
11694 \else
11695 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11696 \fi
11697 \ifx\@pdfprintpagerange\@empty
11698 \else
11699 /PrintPageRange[\@pdfprintpagerange]%
11700 \fi
11701 \ifx\@pdfnumcopies\@empty
11702 \else
11703 /NumCopies \@pdfnumcopies
11704 \fi
11705 }%
11706 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11707 \pdfmark{%
11708 pdfmark=/PUT,%
11709 Raw={%
11710 \string{Catalog\string}<<%
11711 \ifx\Hy@temp\@empty
11712 \else
11713 /ViewerPreferences<<\Hy@temp>>%
11714 \fi
11715 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11716 \ifx\@pdflang\relax
11717 \else
11718 /Lang(\@pdflang)%
11719 \fi
11720 \ifx\@baseurl\@empty

```



```

11721     \else
11722         /URI<</Base(\Hy@pstringB)>>%
11723     \fi
11724     >>%
11725 }%
11726 }%
11727 }
11728 </pdfmark>
11729 <*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.

```

11730 \newif\ifHy@pdfmarkerror
11731 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
11732 \def\pdfmark@[#1]#2{%
11733     \Hy@pdfmarkerrorfalse
11734     \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11735     \@processme
11736     \let\pdf@type\relax
11737     \let\pdf@objdef\ltx@empty
11738     \kvsetkeys{PDF}{#2}%
11739     \ifHy@pdfmarkerror
11740     \else
11741         \ifx\pdf@type\relax
11742             \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11743             \ifx\#1\%
11744                 \else
11745                     \pdf@rect{#1}%
11746                 \fi
11747             \else
11748                 \ifx\#1\%
11749                     \literalps@out{%
11750                         [%
11751                         \ifx\pdf@objdef\ltx@empty
11752                         \else
11753                             /_objdef\string{\pdf@objdef\string}%
11754                         \fi
11755                         \the\pdf@toks\space\pdf@type\space pdfmark%
11756                         ]%
11757                     \else
11758                         \ltx@ifundefined{@\pdf@linktype color}{%
11759                             \Hy@colorlink\@linkcolor
11760                         }{%
11761                             \expandafter\Hy@colorlink
11762                             \csname @\pdf@linktype color\endcsname
11763                         }%
11764                     \pdf@rect{#1}%
11765                     \literalps@out{%
11766                         [%
11767                         \ifx\pdf@objdef\ltx@empty

```

```

11768      \else
11769      /_objdef\string{\pdf@objdef\string}%
11770      \fi
11771      \the\pdf@toks\space\pdf@type\space pdfmark%
11772      }%
11773      \Hy@endcolorlink
11774      \fi
11775      \fi
11776      \fi
11777      }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

11778 \newsavebox{\pdf@box}
11779 \providecommand*{\Hy@setouterhbox}{\sbox}
11780 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11781 \def\Hy@DEST{/DEST}
11782 \def\pdf@rect#1{%
11783   \begingroup
11784   \chardef\x=1 %
11785   \def\Hy@temp{#1}%
11786   \ifx\Hy@temp\ltx@empty
11787     \chardef\x=0 %
11788   \else
11789     \def\y{\anchor@spot}%
11790     \ifx\Hy@temp\y
11791       \def\y{\relax}%
11792     \ifx\anchor@spot\y
11793       \chardef\x=0 %
11794     \fi
11795   \fi
11796   \fi
11797   \expandafter\endgroup
11798   \ifcase\x
11799     \literalps@out{H.S}%
11800     \literalps@out{H.R}%
11801   \else
11802     \leavevmode
11803     \Hy@SaveSpaceFactor
11804     \ifmmode
11805       \def\Hy@LinkMath{$}%
11806     \else
11807       \let\Hy@LinkMath\ltx@empty

```

```

11808 \fi
11809 \ifHy@breaklinks
11810 \Hy@setouterhbox\pdf@box{%
11811 \Hy@RestoreSpaceFactor
11812 \Hy@LinkMath
11813 \Hy@AllowHyphens#1\Hy@xspace@end
11814 \Hy@LinkMath
11815 \Hy@SaveSpaceFactor
11816 }%
11817 \else
11818 \sbox\pdf@box{%
11819 \Hy@RestoreSpaceFactor
11820 \Hy@LinkMath
11821 #1\Hy@xspace@end
11822 \Hy@LinkMath
11823 \Hy@SaveSpaceFactor
11824 }%
11825 \fi
11826 \dimen@ht\pdf@box
11827 \ifdim\dp\pdf@box=\z@
11828 \literalps@out{H.S}%
11829 \else
11830 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11831 \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...).

```

11832 \ifHy@breaklinks
11833 \ifhmode
11834 \Hy@breaklinksunhbox\pdf@box
11835 \else
11836 \box\pdf@box
11837 \fi
11838 \else
11839 \expandafter\box\pdf@box
11840 \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

11841 \ifdim\dimen@=\z@
11842 \literalps@out{H.R}%
11843 \else
11844 \raise\dimen@\hbox{\literalps@out{H.R}}%
11845 \fi
11846 \Hy@RestoreSpaceFactor
11847 \fi
11848 \ifx\pdf@type\Hy@DEST
11849 \else
11850 \pdf@addtoksx{H.B}%
11851 \fi
11852 }

```

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.

```

11853 \newtoks\pdf@toks
11854 \newtoks\pdf@defaulttoks
11855 \pdf@defaulttoks={}
11856 \def\pdf@addtoks#1#2{%
11857   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11858   \@processme
11859 }
11860 \def\pdf@addtoksx#1{%
11861   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11862   \@processme
11863 }
11864 \def\PDFdefaults#1{%
11865   \pdf@defaulttoks={#1}%
11866 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11867 % what is the type of pdfmark?
11868 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11869 % what is the link type?
11870 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11871 \def\pdf@linktype{link}
11872 % named object?
11873 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11874 \let\pdf@objdef\ltx@empty
11875 % parameter is a stream of PDF
11876 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11877 % parameter is a name
11878 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11879 % parameter is a array
11880 \define@key{PDF}{Border}{%
11881   \edef\Hy@temp{#1}%
11882   \ifx\Hy@temp\@empty
11883   \else
11884     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11885   \fi
11886 }
11887 \let\Hy@BorderArrayPatch\@empty
11888 % parameter is a dictionary
11889 \define@key{PDF}{BorderStyle}{%
11890   \edef\Hy@temp{#1}%
11891   \ifx\Hy@temp\@empty
11892   \else
11893     \pdf@addtoks{<<#1>>}{BS}%
11894   \fi
11895 }
11896 % parameter is a array
11897 \define@key{PDF}{Color}{%
11898   \ifx\relax#1\relax
11899   \else
11900     \pdf@addtoks{[#1]}{Color}% hash-ok
11901   \fi

```

```

11902 }
11903 % parameter is a string
11904 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11905 % parameter is a integer
11906 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11907 % parameter is a array
11908 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11909 % parameter is a string
11910 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11911 % parameter is a string or file
11912 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11913 % parameter is a destination
11914 \define@key{PDF}{Dest}{%
11915   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11916   \ifx\Hy@pstringDest\@empty
11917     \Hy@pdfmarkerrortrue
11918     \Hy@Warning{Destination with empty name ignored}%
11919   \else
11920     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11921   \fi
11922 }
11923 \define@key{PDF}{DestAnchor}{%
11924   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11925   \ifx\Hy@pstringDest\@empty
11926     \Hy@pdfmarkerrortrue
11927     \Hy@Warning{Destination with empty name ignored}%
11928   \else
11929     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11930   \fi
11931 }
11932 % parameter is a string
11933 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11934 % parameter is a string
11935 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11936 % parameter is a int
11937 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11938 \define@key{PDF}{PDFAFlags}{%
11939   \ifHy@pdfa
11940     \pdf@addtoks{#1}{F}%
11941   \fi
11942 }
11943 % parameter is a name
11944 \define@key{PDF}{AcroHighlight}{%
11945   \begingroup
11946     \edef\x{#1}%
11947     \expandafter\endgroup\ifx\x\@empty
11948     \else
11949       \pdf@addtoks{#1}{H}%
11950     \fi
11951 }
11952 % parameter is a string
11953 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11954 % parameter is a string
11955 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}

```

```

11956 % parameter is a string
11957 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11958 % parameter is a string
11959 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11960 % parameter is a Boolean
11961 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11962 % parameter is a integer or name
11963 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11964 % parameter is a name
11965 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11966 % parameter is a string
11967 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11968 % parameter is a array
11969 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11970 % parameter is a integer
11971 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11972 % parameter is a name
11973 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11974 % parameter is a string
11975 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11976 % parameter is a string
11977 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11978 % parameter is a string
11979 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11980 % parameter is an array
11981 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11982 % parameter is a string
11983 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11984 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11985 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11986 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11987 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11988 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11989 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11990 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11991 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11992 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11993 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11994 \define@key{PDF}{Trapped}{%
11995   \edef\Hy@temp{#1}%
11996   \ifx\Hy@temp\@empty
11997     \else
11998       \pdf@addtoks{/#1}{Trapped}%
11999   \fi
12000 }
12001
12002 </pdfmarkbase>
12003 <*pdfmark>
12004 \def\Acrobatmenu#1#2{%
12005   \EdefEscapeName\Hy@temp@menu{#1}%
12006   \Hy@Acrobatmenu{#1}{#2}{%
12007     \pdfmark[{#2}] {%
12008       linktype=menu,%

```

```

12009 pdfmark=/ANN,%
12010 AcroHighlight=\@pdfhighlight,%
12011 Border=\@pdfborder,%
12012 BorderStyle=\@pdfborderstyle,%
12013 Color=\@menubordercolor,%
12014 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12015 Subtype=/Link,%
12016 PDFAFlags=4%
12017 }%
12018 }%
12019 }

```

And now for some useful examples:

```

12020 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12021 \def\PDFNextPage@[#1]#2{%
12022   \pdfmark[{#2}]{%
12023     #1,%
12024     Border=\@pdfborder,%
12025     BorderStyle=\@pdfborderstyle,%
12026     Color=.2 .1 .5,%
12027     pdfmark=/ANN,%
12028     Subtype=/Link,%
12029     PDFAFlags=4,%
12030     Page=/Next%
12031   }%
12032 }
12033 \def\PDFPreviousPage{%
12034   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12035 }
12036 \def\PDFPreviousPage@[#1]#2{%
12037   \pdfmark[{#2}]{%
12038     #1,%
12039     Border=\@pdfborder,%
12040     BorderStyle=\@pdfborderstyle,%
12041     Color=.4 .4 .1,%
12042     pdfmark=/ANN,%
12043     Subtype=/Link,%
12044     PDFAFlags=4,%
12045     Page=/Prev%
12046   }%
12047 }
12048 \def\PDFOpen#1{%
12049   \pdfmark{#1,pdfmark=/DOCVIEW}%
12050 }

```

This will only work if you use Distiller 2.1 or higher.

```

12051 \def\hyper@linkurl#1#2{%
12052   \begingroup
12053   \Hy@pstringdef\Hy@pstringURI{#2}%
12054   \hyper@chars
12055   \leavevmode
12056   \pdfmark[{#1}]{%
12057     pdfmark=/ANN,%
12058     linktype=url,%
12059     AcroHighlight=\@pdfhighlight,%

```

```

12060 Border=\@pdfborder,%
12061 BorderStyle=\@pdfborderstyle,%
12062 Color=\@urlbordercolor,%
12063 Action={<<%
12064   /Subtype/URI%
12065   /URI(\Hy@pstringURI)%
12066   \ifHy@href@ismap
12067   /IsMap true%
12068   \fi
12069 >>},%
12070 Subtype=/Link,%
12071 PDFAFlags=4%
12072 }%
12073 \endgroup
12074 }
12075 \def\hyper@linkfile#1#2#3{%
12076 \begingroup
12077 \def\Hy@pstringF{#2}%
12078 \Hy@CleanupFile\Hy@pstringF
12079 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12080 \Hy@pstringdef\Hy@pstringD{#3}%
12081 \Hy@MakeRemoteAction
12082 \leavevmode
12083 \pdfmark[{#1}]{%
12084 pdfmark=/ANN,%
12085 Subtype=/Link,%
12086 PDFAFlags=4,%
12087 AcroHighlight=\@pdfhighlight,%
12088 Border=\@pdfborder,%
12089 BorderStyle=\@pdfborderstyle,%
12090 linktype=file,%
12091 Color=\@filebordercolor,%
12092 Action={%
12093   <<%
12094   /S/GoToR%
12095   \Hy@SetNewWindow
12096   /F(\Hy@pstringF)%
12097   /D%
12098   \ifx\#3\%
12099     [\Hy@href@page\@pdfremotestartview]%
12100   \else
12101     (\Hy@pstringD)cvn%
12102   \fi
12103   \Hy@href@nextactionraw
12104   >>%
12105   }%
12106 }%
12107 \endgroup
12108 }
12109 \def\@hyper@launch run:#1\#2#3{%
12110 \begingroup
12111 \Hy@pstringdef\Hy@pstringF{#1}%
12112 \Hy@pstringdef\Hy@pstringP{#3}%
12113 \leavevmode

```



```

12114 \pdfmark[{#2}]{%
12115 pdfmark=/ANN,%
12116 Subtype=/Link,%
12117 PDFAFlags=4,%
12118 AcroHighlight=\pdfhighlight,%
12119 Border=\pdfborder,%
12120 BorderStyle=\pdfborderstyle,%
12121 linktype=run,%
12122 Color=\@runbordercolor,%
12123 Action={%
12124 <<%
12125 /S/Launch%
12126 \Hy@SetNewWindow
12127 /F(\Hy@pstringF)%
12128 \ifx\#3\%
12129 \else
12130 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12131 \fi
12132 \Hy@href@nextactionraw
12133 >>%
12134 }%
12135 }%
12136 \endgroup
12137 }
12138 \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.

```

12139 \providecommand*{\XR@ext}{pdf}
12140 \let\Hy@raisedlink\ltx@empty
12141 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12142 \def\headerps@out#1{\special{! #1}}%
12143 \input{pdfmark.def}%
12144 \ifx\@pdfproducer\relax
12145 \def\@pdfproducer{dvips + Distiller}%
12146 \fi
12147 \providecommand*\@pdfborder{0 0 1}
12148 \providecommand*\@pdfborderstyle{}
12149 \providecommand*\@pdfview{XYZ}
12150 \providecommand*\@pdfviewparams{ H.V}
12151 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12152 \g@addto@macro\Hy@FirstPageHook{%
12153 \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.

```

12155 /DvipsToPDF{72.27 mul Resolution div} def%
12156 /PDFToDvips{72.27 div Resolution mul} def%
12157 /BPToDvips{72 div Resolution mul}def

```

The values inside the /Border 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.

Note GhostScript changed its behaviour here and later versions do not need this scaling, so test the PostScript interpreter is GhostScript and if so check its version.

If using gs and release > 9.27 no-op, otherwise patch.

```

12158 product (Ghostscript) search {pop pop pop revision 927 gt}%
12159 {pop false} ifelse%
12160 {%
12161 /BorderArrayPatch{} def%
12162 }%
12163 {%
12164 /BorderArrayPatch{%
12165 [exch{%
12166 dup dup type/integertype eq exch type/realtype eq or%
12167 {BPToDvips}if%
12168 }forall]%
12169 }def%
12170 } ifelse

```

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.

```

12171 /HyperBorder {1 PDFToDvips} def%
12172 /H.V {pdf@hoff pdf@voff null} def%
12173 /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

```

12174 /H.S {%
12175 currentpoint %
12176 HyperBorder add /pdf@lly exch def %
12177 dup DvipsToPDF 72 add /pdf@hoff exch def %
12178 HyperBorder sub /pdf@llx exch def%
12179 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ 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

```

12180 /H.L {%
12181 2 sub dup%
12182 /HyperBasePt exch def %
12183 PDFToDvips /HyperBaseDvips exch def %
12184 currentpoint %
12185 HyperBaseDvips sub /pdf@ury exch def%
12186 /pdf@urx exch def%
12187 } def%
12188 /H.A {%
12189 H.L %
12190 % | /pdf@voff| = the distance from the top of the page to a point
12191 % | \baselineskip| above the current point in PDF coordinates
12192 currentpoint exch pop %
12193 vsize 72 sub exch DvipsToPDF %
12194 HyperBasePt sub % baseline skip
12195 sub /pdf@voff exch def%
12196 } def%
12197 /H.R {%
12198 currentpoint %
12199 HyperBorder sub /pdf@ury exch def %
12200 HyperBorder add /pdf@urx exch def %
12201 % | /pdf@voff| = the distance from the top of the page to the current point, in
12202 % PDF coordinates
12203 currentpoint exch pop vsize 72 sub %
12204 exch DvipsToPDF sub /pdf@voff exch def%
12205 } def%
12206 }%
12207 }
12208 \AtBeginShipoutFirst{%
12209 \ifHy@setpagesize
12210 \begingroup
12211 \@ifundefined{stockwidth}{%
12212 \ifdim\paperwidth>\z@
12213 \ifdim\paperheight>\z@
12214 \special{papersize=\the\paperwidth,\the\paperheight}%
12215 \fi
12216 \fi
12217 }{%
12218 \ifdim\stockwidth>\z@
12219 \ifdim\stockheight>\z@
12220 \special{papersize=\the\stockwidth,\the\stockheight}%
12221 \fi
12222 \fi
12223 }%
12224 \endgroup
12225 \fi
12226 \Hy@DisableOption{setpagesize}%
12227 }
12228 \def\setpdfinkmargin#1{%
12229 \begingroup
12230 \setlength{\dimen@}{#1}%

```

```

12231 \literalps@out{%
12232 /HyperBorder{\strip@pt\dimen@ \space PDFToDvips}def%
12233 }%
12234 \endgroup
12235 }
12236 </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.

```

12237 (*vtexpdfmark)
12238 \providecommand*\XR@ext}{pdf}
12239 \let\Hy@raisedlink\ltx@empty
12240 \def\literalps@out#1{\special{pS:#1}}%
12241 \def\headerps@out#1{\immediate\special{pS:#1}}%
12242 \input{pdfmark.def}%
12243 \ifx\@pdfproducer\relax
12244 \ifnum\OpMode=\@ne
12245 \def\@pdfproducer{VTeX}%
12246 \else
12247 \def\@pdfproducer{VTeX + Distiller}%
12248 \fi
12249 \fi
12250 \providecommand*\@pdfborder{0 0 1}
12251 \providecommand*\@pdfborderstyle{}
12252 \providecommand*\@pdfview{XYZ}
12253 \providecommand*\@pdfviewparams{ H.V}

12254 \g@addto@macro\Hy@FirstPageHook{%
12255 \headerps@out{%
12256 /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.

```

12257 /HyperBorder {1} def%
12258 /H.V {pdf@hoff pdf@voff null} def%
12259 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12260 /H.S {%
12261 currentpoint %
12262 HyperBorder sub%
12263 /pdf@lly exch def %
12264 dup 72 add /pdf@hoff exch def %
12265 HyperBorder sub%
12266 /pdf@llx exch def%
12267 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12268   /H.L {%
12269     2 sub%
12270   /HyperBasePt exch def %
12271   currentpoint %
12272   HyperBasePt add HyperBorder add%
12273   /pdf@ury exch def %
12274   HyperBorder add%
12275   /pdf@urx exch def%
12276 } def%
12277 /H.A {%
12278   H.L %
12279   currentpoint exch pop %
12280   vsize 72 sub exch %
12281   HyperBasePt add add%
12282   /pdf@voff exch def%
12283 } def%

pdf@ury = Yc + HyperBorder, pdf@urx = Xc + HyperBorder

12284   /H.R {%
12285     currentpoint %
12286     HyperBorder add%
12287     /pdf@ury exch def %
12288     HyperBorder add%
12289     /pdf@urx exch def %
12290     currentpoint exch pop vsize 72 sub add%
12291     /pdf@voff exch def%
12292   } def%
12293 }%
12294 }

12295 \def\setpdfinkmargin#1{%
12296   \begingroup
12297     \setlength{\dimen@}{#1}%
12298     \literalps@out{%
12299       /HyperBorder{\strip@pt\dimen@}def%
12300     }%
12301   \endgroup
12302 }

12303 </vtxpdfmark>

```

47.11 Textures

```

12304 <*textures>
12305 \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.

```
12306 \begingroup
12307 \obeylines %
12308 \gdef\Hy@ps@CR{\noexpand
12309 }%
12310 \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`.

```
12311 \def\literalps@out#1{%
12312 \special{postscript 0 0 transform}%
12313 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12314 }%
12315 %
```

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.

```
12316 \def\headerps@out#1{%
12317 \special{%
12318 prepostscript TeXdict begin\Hy@ps@CR
12319 #1\Hy@ps@CR
12320 end%
12321 }%
12322 }%
12323 %
```

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.

```
12324 \g@addto@macro\Hy@FirstPageHook{%
12325 \headerps@out{%
12326 /betterpdfmark {%
12327 systemdict begin %
12328 dup /BP eq%
12329 {cleartomark gsave nulldevice []}%
12330 {dup /EP eq%
12331 {cleartomark cleartomark grestore}%
12332 {cleartomark}%
12333 ifelse%
12334 }ifelse %
12335 end%
12336 }def\Hy@ps@CR
12337 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12338 }% end of \headerps@out
```

```

12339 }% end of \AtBeginShipoutFirst
12340 %
12341 \input{pdfmark.def}%
12342 %
12343 \ifx\@pdfproducer\relax
12344 \def\@pdfproducer{Textures + Distiller}%
12345 \fi
12346 \providecommand*\@pdfborder{0 0 1}
12347 \providecommand*\@pdfborderstyle{}
12348 \providecommand*\@pdfview{XYZ}
12349 \providecommand*\@pdfviewparams{ H.V}
12350 %

```

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 .

```

12351 \Hy@AtBeginDocument{%
12352 \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12353 /vsize {\Hy@pageheight} def%
12354 /DvipsToPDF {} def%
12355 /PDFToDvips {} def%
12356 /BPToDvips {} def%
12357 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12358 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12359 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12360 /H.S {%
12361 currentpoint %
12362 HyperBorder add /pdf@lly exch def %
12363 dup DvipsToPDF 72 add /pdf@hoff exch def %
12364 HyperBorder sub /pdf@llx exch def%
12365 } def\Hy@ps@CR
12366 /H.L {%
12367 2 sub %
12368 PDFToDvips /HyperBase exch def %
12369 currentpoint %
12370 HyperBase sub /pdf@ury exch def%
12371 /pdf@urx exch def%
12372 } def\Hy@ps@CR
12373 /H.A {%
12374 H.L %
12375 currentpoint exch pop %
12376 vsize 72 sub exch DvipsToPDF %
12377 HyperBase sub % baseline skip
12378 sub /pdf@voff exch def%
12379 } def\Hy@ps@CR
12380 /H.R {%
12381 currentpoint %
12382 HyperBorder sub /pdf@ury exch def %
12383 HyperBorder add /pdf@urx exch def %

```

```

12384     currentpoint exch pop vsize 72 sub %
12385     exch DvipsToPDF sub /pdf@voff exch def%
12386   } def\Hy@ps@CR
12387 }%
12388 }

12389 \def\setpdfinkmargin#1{%
12390   \begingroup
12391     \setlength{\dimen@}{#1}%
12392     \literalps@out{%
12393       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12394     }%
12395   \endgroup
12396 }

12397 \Hy@AtBeginDocument{%
12398   \ifHy@colorlinks
12399     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12400   \fi
12401 }

```

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.

```

12402 \expandafter\let\expandafter\keepPDF@SetupDoc
12403   \csname PDF@SetupDoc\endcsname
12404 \def\PDF@SetupDoc{%
12405   \ifx\@baseurl\@empty
12406   \else
12407     \special{html:<base href="\@baseurl">}%
12408   \fi
12409   \keepPDF@SetupDoc
12410 }

12411 \Hy@WrapperDef\hyper@anchor#1{%
12412   \Hy@SaveLastskip
12413   \Hy@VerboseAnchor{#1}%
12414   \begingroup
12415     \let\protect=\string
12416     \special{html:<a name=%
12417       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12418   \endgroup
12419   \Hy@activeanchortrue
12420   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12421   \special{html:</a>}%
12422   \Hy@activeanchorfalse
12423   \Hy@RestoreLastskip
12424 }

12425 \Hy@WrapperDef\hyper@anchorstart#1{%
12426   \Hy@SaveLastskip
12427   \Hy@VerboseAnchor{#1}%
12428   \begingroup
12429     \hyper@chars
12430     \special{html:<a name=%
12431       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12432   \endgroup

```



```

12433 \Hy@activeanchortrue
12434 }
12435 \def\hyper@anchorend{%
12436 \special{html:</a>}%
12437 \Hy@activeanchorfalse
12438 \Hy@RestoreLastskip
12439 }
12440 \def\@urltype{url}
12441 \def\hyper@linkstart#1#2{%
12442 \Hy@VerboseLinkStart{#1}{#2}%
12443 \expandafter\Hy@colorlink\csname @#1color\endcsname
12444 \def\Hy@tempa{#1}%
12445 \ifx\Hy@tempa\@urltype
12446 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12447 \else
12448 \begingroup
12449 \hyper@chars
12450 \special{%
12451 html:<a href=
12452 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
12453 }%
12454 \endgroup
12455 \fi
12456 }
12457 \def\hyper@linkend{%
12458 \special{html:</a>}%
12459 \Hy@endcolorlink
12460 }
12461 \def\hyper@linkfile#1#2#3{%
12462 \hyper@linkurl{#1}{%
12463 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
12464 }%
12465 }
12466 \def\hyper@linkurl#1#2{%
12467 \leavevmode
12468 \ifHy@raiselinks
12469 \Hy@SaveSpaceFactor
12470 \Hy@SaveSavedSpaceFactor
12471 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12472 \Hy@RestoreSavedSpaceFactor
12473 \@linkdim\dp\@tempboxa
12474 \lower\@linkdim\hbox{%
12475 \hyper@chars
12476 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12477 }%
12478 \Hy@colorlink\@urlcolor
12479 \Hy@RestoreSpaceFactor
12480 #1\Hy@xspace@end
12481 \Hy@SaveSpaceFactor
12482 \@linkdim\ht\@tempboxa
12483 \advance\@linkdim by -6.5\p@
12484 \raise\@linkdim\hbox{\special{html:</a>}}%
12485 \Hy@endcolorlink
12486 \Hy@RestoreSpaceFactor

```

```

12487 \else
12488 \begingroup
12489 \hyper@chars
12490 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12491 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12492 \special{html:</a>}%
12493 \Hy@endcolorlink
12494 \endgroup
12495 \fi
12496 }

```

Very poor implementation of \hyper@link without considering #1.

```

12497 \def\hyper@link#1#2#3{%
12498 \Hy@VerboseLinkStart{#1}{#2}%
12499 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12500 }
12501 \def\hyper@image#1#2{%
12502 \begingroup
12503 \hyper@chars
12504 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12505 \endgroup
12506 }
12507 </textures>

```

47.12 dvipsone

```

12508 % \subsection{dvipsone driver}
12509 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12510 % | \special| commands.
12511 (*dvipsone)
12512 \providecommand*\XR@ext}{pdf}
12513 \let\Hy@raisedlink\ltx@empty
12514 \providecommand*\@pdfborder{0 0 1}
12515 \providecommand*\@pdfborderstyle{}
12516 \def\literalps@out#1{\special{ps:#1}}%
12517 \def\headerps@out#1{\special{headertext=#1}}%
12518 \input{pdfmark.def}%
12519 \HyInfo@AddonUnsupportedtrue
12520 \def\PDF@FinishDoc{%
12521 \Hy@UseMaketitleInfos
12522 \HyInfo@TrappedUnsupported
12523 \special{PDF: Keywords \@pdfkeywords}%
12524 \special{PDF: Title \@pdftitle}%
12525 \special{PDF: Creator \@pdfcreator}%
12526 \ifx\@pdfcreationdate\@empty
12527 \else
12528 \special{PDF: CreationDate \@pdfcreationdate}%
12529 \fi
12530 \ifx\@pdfmoddate\@empty
12531 \else
12532 \special{PDF: ModDate \@pdfmoddate}%
12533 \fi
12534 \special{PDF: Author \@pdfauthor}%
12535 \ifx\@pdfproducer\relax

```

```

12536 \else
12537   \special{PDF: Producer \@pdfproducer}%
12538 \fi
12539 \special{PDF: Subject \@pdfsubject}%
12540 \Hy@DisableOption{pdfauthor}%
12541 \Hy@DisableOption{pdftitle}%
12542 \Hy@DisableOption{pdfsubject}%
12543 \Hy@DisableOption{pdfcreator}%
12544 \Hy@DisableOption{addtopdfcreator}%
12545 \Hy@DisableOption{pdfcreationdate}%
12546 \Hy@DisableOption{pdfcreationdate}%
12547 \Hy@DisableOption{pdfmoddate}%
12548 \Hy@DisableOption{pdfproducer}%
12549 \Hy@DisableOption{pdfkeywords}%
12550 \Hy@DisableOption{pdftrapped}%
12551 \Hy@DisableOption{pdfinfo}%
12552 }
12553 \def\PDF@SetupDoc{%
12554   \def\Hy@temp{}%
12555   \ifx\@pdfstartpage\@empty
12556     \else
12557       \ifx\@pdfstartview\@empty
12558         \else
12559           \edef\Hy@temp{%
12560             ,Page=\@pdfstartpage
12561             ,View=\@pdfstartview
12562           }%
12563         \fi
12564       \fi
12565     \edef\Hy@temp{%
12566       \noexpand\pdfmark{%
12567         pdfmark=/DOCVIEW,%
12568         PageMode=/\@pdfpagemode
12569       }\Hy@temp
12570     }%
12571   }%
12572   \Hy@temp
12573   \ifx\@pdfpagescrop\@empty
12574     \else
12575       \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12576     \fi
12577   \edef\Hy@temp{%
12578     \ifHy@pdftoolbar\else /HideToolbar true\fi
12579     \ifHy@pdfmenubar\else /HideMenubar true\fi
12580     \ifHy@pdfwindowui\else /HideWindowUI true\fi
12581     \ifHy@pdfwindow /FitWindow true\fi
12582     \ifHy@pdfcenterwindow /CenterWindow true\fi
12583     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12584     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12585     \Hy@UseNameKey{Direction}\@pdfdirection
12586     \Hy@UseNameKey{ViewArea}\@pdfviewarea
12587     \Hy@UseNameKey{ViewClip}\@pdfviewclip
12588     \Hy@UseNameKey{PrintArea}\@pdfprintarea
12589     \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

12590 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12591 \Hy@UseNameKey{Duplex}\@pdfduplex
12592 \ifx\@pdfpicktraybypdfsize\@empty
12593 \else
12594 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12595 \fi
12596 \ifx\@pdfprintpagerange\@empty
12597 \else
12598 /PrintPageRange[\@pdfprintpagerange]%
12599 \fi
12600 \ifx\@pdfnumcopies\@empty
12601 \else
12602 /NumCopies \@pdfnumcopies
12603 \fi
12604 }%
12605 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12606 \pdfmark{%
12607 pdfmark=/PUT,%
12608 Raw={%
12609 \string{Catalog\string}<<%
12610 \ifx\Hy@temp\@empty
12611 \else
12612 /ViewerPreferences<<\Hy@temp>>%
12613 \fi
12614 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12615 \ifx\@pdflang\relax
12616 \else
12617 /Lang(\@pdflang)%
12618 \fi
12619 \ifx\@baseurl\@empty
12620 \else
12621 /URI<</Base(\Hy@pstringB)>>%
12622 \fi
12623 >>%
12624 }%
12625 }%
12626 }
12627 \providecommand*\@pdfview{XYZ}
12628 \providecommand*\@pdfviewparams{ %
12629 gsave revscl currentpoint grestore %
12630 72 add exch pop null exch null%
12631 }
12632 \def\Hy@BorderArrayPatch{BorderArrayPatch}

These are called at the start and end of unboxed links; their job is to leave available
PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates
of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF
page offsets. These latter are currently not used in the dvipsone setup. The Rect
pair are called at the LL and UR corners of a box known to TEX.
12633 \g@addto@macro\Hy@FirstPageHook{%
12634 \headerps@out{%

dvipsone lives in scaled points; does this mean 65536 or 65781?
12635 /DvipsToPDF { 65781 div } def%
12636 /PDFToDvips { 65781 mul } def%

```

```

12637 /BPToDvips{65781 mul}def%
12638 /HyperBorder { 1 PDFToDvips } def%
12639 /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.

```

12640 /BorderArrayPatch{%
12641   [exch{%
12642     dup dup type/integertype eq exch type/realtype eq or%
12643     {BPToDvips}if%
12644   }forall]%
12645 }def%
12646 /H.S {%
12647   currentpoint %
12648   HyperBorder add /pdf@lly exch def %
12649   dup DvipsToPDF 72 add /pdf@hoff exch def %
12650   HyperBorder sub /pdf@llx exch def%
12651 } def%
12652 /H.L {%
12653   2 sub %
12654   PDFToDvips /HyperBase exch def %
12655   currentpoint %
12656   HyperBase sub /pdf@ury exch def%
12657   /pdf@urx exch def%
12658 } def%
12659 /H.A {%
12660   H.L %
12661   currentpoint exch pop %
12662   HyperBase sub % baseline skip
12663   DvipsToPDF /pdf@voff exch def%
12664 } def%
12665 /H.R {%
12666   currentpoint %
12667   HyperBorder sub /pdf@ury exch def %
12668   HyperBorder add /pdf@urx exch def %
12669   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12670 } def%
12671 }%
12672 }

12673 \def\setpdfinkmargin#1{%
12674   \begingroup
12675     \setlength{\dimen@}{#1}%
12676     \literalps@out{%
12677       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12678     }%
12679   \endgroup
12680 }

```

```
12681 </dvipsone>
```

47.13 TeX4ht

```

12682 <*tex4ht>
12683 \providecommand*\XR@ext{\html}

```

```

12684 \let\Hy@raisedlink\ltx@empty
12685 \@ifpackageloaded{tex4ht}{%
12686   \Hy@InfoNoLine{tex4ht is already loaded}%
12687 }{%
12688   \RequirePackage[hTeX4ht]{tex4ht}%
12689 }
12690 \hyperlinkfileprefix{}
12691 \let\PDF@FinishDoc\ltx@empty
12692 \def\PDF@SetupDoc{%
12693   \ifx\@baseurl\@empty
12694   \else
12695     \special{t4ht=<base href="\@baseurl">}%
12696   \fi
12697 }
12698 \Hy@WrapperDef\hyper@anchor#1{%
12699   \Hy@SaveLastskip
12700   \Hy@VerboseAnchor{#1}%
12701   \begingroup
12702     \let\protect=\string
12703     \special{t4ht=<a name=%
12704       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12705   \endgroup
12706   \Hy@activeanchortrue
12707   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12708   \special{t4ht=</a>}%
12709   \Hy@activeanchorfalse
12710   \Hy@RestoreLastskip
12711 }
12712 \Hy@WrapperDef\hyper@anchorstart#1{%
12713   \Hy@SaveLastskip
12714   \Hy@VerboseAnchor{#1}%
12715   \begingroup
12716     \hyper@chars\special{t4ht=<a name=%
12717       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12718   \endgroup
12719   \Hy@activeanchortrue
12720 }
12721 \def\hyper@anchorend{%
12722   \special{t4ht=</a>}%
12723   \Hy@activeanchorfalse
12724   \Hy@RestoreLastskip
12725 }
12726 \def\@urltype{url}
12727 \def\hyper@linkstart#1#2{%
12728   \Hy@VerboseLinkStart{#1}{#2}%
12729   \expandafter\Hy@colorlink\csname @#1color\endcsname
12730   \def\Hy@tempa{#1}%
12731   \ifx\Hy@tempa\@urltype
12732     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12733   \else
12734     \begingroup
12735       \hyper@chars
12736       \special{t4ht=<a href=%
12737         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%

```

```

12738 \endgroup
12739 \fi
12740 }
12741 \def\hyper@linkend{%
12742 \special{t4ht=</a>}%
12743 \Hy@endcolorlink
12744 }
12745 \def\hyper@linkfile#1#2#3{%
12746 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12747 }
12748 \def\hyper@linkurl#1#2{%
12749 \leavevmode
12750 \ifHy@raiselinks
12751 \Hy@SaveSpaceFactor
12752 \Hy@SaveSavedSpaceFactor
12753 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12754 \Hy@RestoreSavedSpaceFactor
12755 \@linkdim\dp\@tempboxa
12756 \lower\@linkdim\hbox{%
12757 \begingroup
12758 \hyper@chars
12759 \special{%
12760 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12761 }%
12762 \endgroup
12763 }%
12764 \Hy@colorlink\@urlcolor
12765 \Hy@RestoreSpaceFactor
12766 #1\Hy@xspace@end
12767 \Hy@SaveSpaceFactor
12768 \Hy@endcolorlink
12769 \@linkdim\ht\@tempboxa
12770 \advance\@linkdim by -6.5\p@
12771 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12772 \Hy@RestoreSpaceFactor
12773 \else
12774 \begingroup
12775 \hyper@chars
12776 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12777 \Hy@colorlink\@urlcolor
12778 #1\Hy@xspace@end
12779 \Hy@endcolorlink
12780 \special{t4ht=</a>}%
12781 \endgroup
12782 \fi
12783 }

Poor implementation of \hyper@link without considering #1.
12784 \def\hyper@link#1#2#3{%
12785 \Hy@VerboseLinkStart{#1}{#2}%
12786 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12787 }
12788 \def\hyper@image#1#2{%
12789 \begingroup
12790 \hyper@chars

```

```

12791 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12792 \endgroup
12793 }
12794 \let\autoref\ref
12795 \ifx \rEfLiNK \UnDef
12796 \def\rEfLiNK #1#2{#2}%
12797 \fi
12798 \let\backref\ltx@gobble

Fix for tex4ht.
12799 \AtBeginDocument{%
12800 \expandafter
12801 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12802 \expandafter\def\csname Make:Label\endcsname#1#2{%
12803 \ifhmode
12804 \Hy@SaveSpaceFactor
12805 \else
12806 \global\Hy@SavedSpaceFactor=1000 %
12807 \fi
12808 \Hy@OrgMakeLabel{#1}{%
12809 \Hy@RestoreSpaceFactor
12810 #2\Hy@xspace@end%
12811 \Hy@SaveSpaceFactor
12812 }%
12813 \Hy@RestoreSpaceFactor
12814 }%
12815 }
12816 </tex4ht>
12817 <*tex4htcfg>
12818 \IfFileExists{\jobname.cfg}{\endinput}{}
12819 \Preamble{html}
12820 \begin{document}%
12821 \EndPreamble
12822 \def\TeX{TeX}
12823 \def\OMEGA{Omega}
12824 \def\LaTeX{LaTeX}
12825 \def\LaTeXe{LaTeX2e}
12826 \def\eTeX{e-TeX}
12827 \def\MF{Metafont}
12828 \def\MP{MetaPost}
12829 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12830 <*pdfmark>
12831 \long\def\@Form[#1]{%
12832 \g@addto@macro\Hy@FirstPageHook{%
12833 \headerps@out{%
12834 [%
12835 /_objdef{pdfDocEncoding}%
12836 /type/dict%
12837 /OBJ pdfmark%

```


12838 [%
12839 {pdfDocEncoding}%
12840 <<%
12841 /Type/Encoding%
12842 /Differences[%
12843 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12844 /tilde %
12845 39/quotesingle %
12846 96/grave %
12847 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12848 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12849 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12850 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12851 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12852 160/Euro %
12853 164/currency %
12854 166/brokenbar %
12855 168/dieresis/copyright/ordfeminine %
12856 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12857 /twosuperior/threesuperior/acute/mu %
12858 183/periodcentered/cedilla/onesuperior/ordmasculine %
12859 188/onequarter/onehalf/threequarters %
12860 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12861 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12862 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12863 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12864 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12865 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12866 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12867 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12868 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12869 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12870]%
12871 >>%
12872 /PUT pdfmark%
12873 [%
12874 /_objdef{ZaDb}%
12875 /type/dict%
12876 /OBJ pdfmark%
12877 [%
12878 {ZaDb}%
12879 <<%
12880 /Type/Font%
12881 /Subtype/Type1%
12882 /Name/ZaDb%
12883 /BaseFont/ZapfDingbats%
12884 >>%
12885 /PUT pdfmark%
12886 [%
12887 /_objdef{Helv}%
12888 /type/dict%
12889 /OBJ pdfmark%
12890 [%
12891 {Helv}%

```

12892 <<%
12893 /Type/Font%
12894 /Subtype/Type1%
12895 /Name/Helv%
12896 /BaseFont/Helvetica%
12897 /Encoding{pdfDocEncoding}%
12898 >>%
12899 /PUT pdfmark%
12900 [%
12901 /__objdef{aform}%
12902 /type/dict%
12903 /OBJ pdfmark%
12904 [%
12905 /__objdef{afields}%
12906 /type/array%
12907 /OBJ pdfmark%
12908 [%
12909 /__objdef{corder}%
12910 /type/array%
12911 /OBJ pdfmark%
12912 {%
12913 [%
12914 /BBox[0 0 100 100]%
12915 /__objdef{Check}%
12916 /BP pdfmark %
12917 1 0 0 setrgbcolor%
12918 /ZapfDingbats 80 selectfont %
12919 20 20 moveto%
12920 (4)show%
12921 [/EP pdfmark%
12922 [%
12923 /BBox[0 0 100 100]%
12924 /__objdef{Cross}%
12925 /BP pdfmark %
12926 1 0 0 setrgbcolor%
12927 /ZapfDingbats 80 selectfont %
12928 20 20 moveto%
12929 (8)show%
12930 [/EP pdfmark%
12931 [%
12932 /BBox[0 0 250 100]%
12933 /__objdef{Submit}%
12934 /BP pdfmark %
12935 0.6 setgray %
12936 0 0 250 100 rectfill %
12937 1 setgray %
12938 2 2 moveto %
12939 2 98 lineto %
12940 248 98 lineto %
12941 246 96 lineto %
12942 4 96 lineto %
12943 4 4 lineto %
12944 fill %
12945 0.34 setgray %

```

```

12946 248 98 moveto %
12947 248 2 lineto %
12948 2 2 lineto %
12949 4 4 lineto %
12950 246 4 lineto %
12951 246 96 lineto %
12952 fill%
12953 /Helvetica 76 selectfont %
12954 0 setgray %
12955 8 22.5 moveto%
12956 (Submit)show%
12957 [/EP pdfmark%
12958 [%
12959 /BBox[0 0 250 100]%
12960 /__objdef{SubmitP}%
12961 /BP pdfmark %
12962 0.6 setgray %
12963 0 0 250 100 rectfill %
12964 0.34 setgray %
12965 2 2 moveto %
12966 2 98 lineto %
12967 248 98 lineto %
12968 246 96 lineto %
12969 4 96 lineto %
12970 4 4 lineto %
12971 fill %
12972 1 setgray %
12973 248 98 moveto %
12974 248 2 lineto %
12975 2 2 lineto %
12976 4 4 lineto %
12977 246 4 lineto %
12978 246 96 lineto %
12979 fill%
12980 /Helvetica 76 selectfont %
12981 0 setgray %
12982 10 20.5 moveto%
12983 (Submit)show%
12984 [/EP pdfmark%
12985 } ?pdfmark%
12986 [%
12987 {aform}%
12988 <<%
12989 /Fields{afields}%
12990 /DR<<%
12991 /Font<<%
12992 /ZaDb{ZaDb}%
12993 /Helv{Helv}%
12994 >>%
12995 >>%
12996 /DA(/Helv 10 Tf 0 g)%
12997 /CO{corder}%
12998 \ifHy@pdfa
12999 \else

```

```

13000 \ifHyField@NeedAppearances
13001 /NeedAppearances true%
13002 \fi
13003 \fi
13004 >>%
13005 /PUT pdfmark%
13006 [%
13007 {Catalog}%
13008 <<%
13009 /AcroForm{aform}%
13010 >>%
13011 /PUT pdfmark%
13012 }}%
13013 \kvsetkeys{Form}{#1}%
13014 }
13015 \let\@endForm\ltx@empty
13016 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13017 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13018 }

13019 \newcount\HyField@AnnotCount
13020 \HyField@AnnotCount=\z@
13021 \def\HyField@AdvanceAnnotCount{%
13022 \global\advance\HyField@AnnotCount\@ne
13023 }
13024 \def\HyField@TheAnnotCount{%
13025 \the\HyField@AnnotCount
13026 }

13027 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13028 \def\HyField@AddToFields#1{%
13029 \pdfmark{%
13030 pdfmark=/APPEND,%
13031 Raw={%
13032 \string{afields\string}%
13033 \string{#1\HyField@TheAnnotCount\string}%
13034 }%
13035 }%
13036 \ifx\Fld@calculate@code\ltx@empty
13037 \else
13038 \pdfmark{%
13039 pdfmark=/APPEND,%
13040 Raw={%
13041 \string{corder\string}%
13042 \string{#1\HyField@TheAnnotCount\string}%
13043 }%
13044 }%
13045 \fi
13046 }

13047 \def\@TextField[#1]#2{% parameters, label
13048 \def\Fld@name{#2}%
13049 \let\Fld@default\ltx@empty
13050 \let\Fld@value\@empty
13051 \def\Fld@width{\DefaultWidthofText}%
13052 \def\Fld@height{%

```

```

13053 \ifFld@multiline
13054 \DefaultHeightofTextMultiline
13055 \else
13056 \DefaultHeightofText
13057 \fi
13058 }%
13059 \begingroup
13060 \expandafter\HyField@SetKeys\expandafter{%
13061 \DefaultOptionsofText,#1%
13062 }%
13063 \HyField@FlagsText
13064 \ifFld@hidden\def\Fld@width{1sp}\fi
13065 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
13066 \HyField@AdvanceAnnotCount
13067 \LayoutTextField{#2}{%
13068 \leavevmode
13069 \Hy@escapeform\PDFForm@Text
13070 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13071 pdfmark=/ANN,%
13072 objdef=text\HyField@TheAnnotCount,%
13073 Raw={\PDFForm@Text}%
13074 }%
13075 }%
13076 \HyField@AddToFields{text}%
13077 \endgroup
13078 }
13079 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13080 \def\Fld@name{#2}%
13081 \let\Fld@default\relax
13082 \let\Fld@value\relax
13083 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13084 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13085 \begingroup
13086 \Fld@menulength=0 %
13087 \@tempdima\z@
13088 \@for\@curropt:=#3\do{%
13089 \expandafter\Fld@checkequals\@curropt==\%
13090 \Hy@StepCount\Fld@menulength
13091 \settowidth{\@tempdimb}{\@currDisplay}%
13092 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13093 }%
13094 \advance\@tempdima by 15\p@
13095 \begingroup
13096 \HyField@SetKeys{#1}%
13097 \edef\x{\endgroup
13098 \noexpand\expandafter
13099 \noexpand\HyField@SetKeys
13100 \noexpand\expandafter{%
13101 \expandafter\noexpand\curname DefaultOptionsof%
13102 \ifFld@radio
13103 Radio%
13104 \else
13105 \ifFld@combo
13106 \ifFld@popdown

```

```

13107         PopdownBox%
13108     \else
13109         ComboBox%
13110     \fi
13111 \else
13112     ListBox%
13113 \fi
13114 \fi
13115 \endcsname
13116 }%
13117 }\x
13118 \HyField@SetKeys{#1}%
13119 \ifFld@hidden\def\Fld@width{1sp}\fi
13120 \ifx\Fld@value\relax
13121     \let\Fld@value\Fld@default
13122 \fi
13123 \LayoutChoiceField{#2}{%
13124     \ifFld@radio
13125         \HyField@FlagsRadioButton
13126         \@@Radio{#3}%
13127     \else
13128         \begingroup
13129         \HyField@FlagsChoice
13130         \ifdim\Fld@width<\@tempdima
13131             \ifdim\@tempdima<1cm\@tempdima1cm\fi
13132             \edef\Fld@width{\the\@tempdima}%
13133         \fi
13134         \ifFld@combo
13135         \else
13136             \@tempdima=\the\Fld@menulength\Fld@charsize
13137             \advance\@tempdima by \Fld@borderwidth bp %
13138             \advance\@tempdima by \Fld@borderwidth bp %
13139             \edef\Fld@height{\the\@tempdima}%
13140         \fi
13141         \@@ListBox{#3}%
13142         \endgroup
13143     \fi
13144 }%
13145 \endgroup
13146 }
13147 \def\@@Radio#1{%
13148     \Fld@listcount=0 %
13149     \EdefEscapeName\Fld@default{\Fld@default}%
13150     \@for\@curropt:=#1\do{%
13151         \expandafter\Fld@checkequals\@curropt==\\%
13152         \EdefEscapeName\@currValue{\@currValue}%
13153         \Hy@StepCount\Fld@listcount
13154         \@currDisplay\space
13155         \Hy@escapeform\PDFForm@Radio
13156         \ifnum\Fld@listcount=1 %
13157             \HyField@AdvanceAnnotCount
13158         \fi
13159         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13160             pdfmark=/ANN,%

```

```

13161     objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13162     Raw={%
13163         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13164     }%
13165 } % deliberate space between radio buttons
13166 \ifnum\Fld@listcount=1 %
13167     \HyField@AddToFields{radio}%
13168 \fi
13169 }%
13170 }
13171 \newcount\Fld@listcount
13172 \def\@@Listbox#1{%
13173     \HyField@PDFChoices{#1}%
13174     \Hy@escapeform\PDFForm@List
13175     \HyField@AdvanceAnnotCount
13176     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13177         pdfmark=/ANN,%
13178         objdef=list\HyField@TheAnnotCount,%
13179         Raw={\PDFForm@List}%
13180     }%
13181     \HyField@AddToFields{list}%
13182 }
13183 \def\@PushButton[#1]#2{% parameters, label
13184     \def\Fld@name{#2}%
13185     \begingroup
13186         \expandafter\HyField@SetKeys\expandafter{%
13187             \DefaultOptionsofPushButton,#1%
13188         }%
13189         \ifHy@pdfa
13190             \Hy@Error{%
13191                 PDF/A: Push button with JavaScript is prohibited%
13192             }\@ehc
13193             \LayoutPushButtonField{%
13194                 \leavevmode
13195                 \MakeButtonField{#2}%
13196             }%
13197         \else
13198             \HyField@FlagsPushButton
13199             \ifFld@hidden\def\Fld@width{1sp}\fi
13200             \HyField@AdvanceAnnotCount
13201             \LayoutPushButtonField{%
13202                 \leavevmode
13203                 \Hy@escapeform\PDFForm@Push
13204                 \pdfmark[\MakeButtonField{#2}]{%
13205                     pdfmark=/ANN,%
13206                     objdef=push\HyField@TheAnnotCount,%
13207                     Raw={\PDFForm@Push}%
13208                 }%
13209             }%
13210             \HyField@AddToFields{push}%
13211         \fi
13212     \endgroup
13213 }
13214 \def\@Submit[#1]#2{%

```

```

13215 \def\Fld@width{\DefaultWidthofSubmit}%
13216 \def\Fld@height{\DefaultHeightofSubmit}%
13217 \begingroup
13218 \expandafter\HyField@SetKeys\expandafter{%
13219 \DefaultOptionsofSubmit,#1%
13220 }%
13221 \HyField@FlagsPushButton
13222 \HyField@FlagsSubmit
13223 \ifFld@hidden\def\Fld@width{1sp}\fi
13224 \Hy@escapeform\PDFForm@Submit
13225 \HyField@AdvanceAnnotCount
13226 \pdfmark[\MakeButtonField{#2}]{%
13227 pdfmark=/ANN,%
13228 objdef=submit\HyField@TheAnnotCount,%
13229 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13230 }%
13231 \HyField@AddToFields{submit}%
13232 \endgroup
13233 }
13234 \def\@Reset[#1]#2{%
13235 \def\Fld@width{\DefaultWidthofReset}%
13236 \def\Fld@height{\DefaultHeightofReset}%
13237 \begingroup
13238 \expandafter\HyField@SetKeys\expandafter{%
13239 \DefaultOptionsofReset,#1%
13240 }%
13241 \leavevmode
13242 \ifHy@pdfa
13243 \Hy@Error{%
13244 PDF/A: Reset action is prohibited%
13245 }\@ehc
13246 \MakeButtonField{#2}%
13247 \else
13248 \HyField@FlagsPushButton
13249 \ifFld@hidden\def\Fld@width{1sp}\fi
13250 \Hy@escapeform\PDFForm@Reset
13251 \HyField@AdvanceAnnotCount
13252 \pdfmark[\MakeButtonField{#2}]{%
13253 pdfmark=/ANN,%
13254 objdef=reset\HyField@TheAnnotCount,%
13255 Raw={\PDFForm@Reset}%
13256 }%
13257 \HyField@AddToFields{reset}%
13258 \fi
13259 \endgroup
13260 }%
13261 \def\@CheckBox[#1]#2{% parameters, label
13262 \def\Fld@name{#2}%
13263 \def\Fld@default{0}%
13264 \begingroup
13265 \def\Fld@width{\DefaultWidthofCheckBox}%
13266 \def\Fld@height{\DefaultHeightofCheckBox}%
13267 \expandafter\HyField@SetKeys\expandafter{%
13268 \DefaultOptionsofCheckBox,#1%

```



```

13269 }%
13270 \HyField@FlagsCheckBox
13271 \ifFld@hidden\def\Fld@width{1sp}\fi
13272 \HyField@AdvanceAnnotCount
13273 \LayoutCheckField{#2}{%
13274 \leavevmode
13275 \Hy@escapeform\PDFForm@Check
13276 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13277 pdfmark=/ANN,%
13278 objdef=check\HyField@TheAnnotCount,%
13279 Raw={\PDFForm@Check}%
13280 }%
13281 }%
13282 \HyField@AddToFields{check}%
13283 \endgroup
13284 }
13285 \pdfmark>

```

48.2 HyperTeX

```

13286 \*hypertex>
13287 \def\@Form[#1]{%
13288 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13289 }
13290 \let\@endForm\ltx@empty
13291 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13292 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13293 }
13294 \def\@TextField[#1]#2{% parameters, label
13295 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13296 }
13297 \def\@CheckBox[#1]#2{% parameters, label
13298 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13299 }
13300 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13301 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13302 }
13303 \def\@PushButton[#1]#2{% parameters, label
13304 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13305 }
13306 \def\@Reset[#1]#2{%
13307 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13308 }
13309 \def\@Submit[#1]#2{%
13310 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13311 }
13312 \hypertex>

```

48.3 TeX4ht

```

13313 \*tex4ht>
13314 \def\@Form[#1]{%
13315 \kvsetkeys{Form}{#1}%
13316 \HCode{<form action="\Form@action" method="\Form@method">}%
13317 }

```

```

13318 \def\@endForm{\HCode{</form>}}
13319 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13320 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13321 }
13322 \def\@TextField[#1]#2{% parameters, label
13323 \let\Hy@reserved@a\@empty
13324 \def\Fld@name{#2}%
13325 \let\Fld@default\ltx@empty
13326 \bgroup
13327 \Field@toks={ }%
13328 \kvsetkeys{Field}{#1}%
13329 \HCode{<label for="\Fld@name">#2</label>}%
13330 \ifFld@password
13331 \@@PasswordField
13332 \else
13333 \@@TextField
13334 \fi
13335 \egroup
13336 }
13337 \def\@@PasswordField{%
13338 \HCode{%
13339 <input type="password" %
13340 id="\Fld@name" %
13341 name="\Fld@name" %
13342 \ifFld@hidden type="hidden" \fi
13343 value="\Fld@default" %
13344 \the\Field@toks
13345 >%
13346 }%
13347 }
13348 \def\@@TextField{%
13349 \ifFld@multiline
13350 \HCode{<textarea %
13351 \ifFld@readonly readonly \fi
13352 id="\Fld@name" %
13353 name="\Fld@name" %
13354 \ifFld@hidden type="hidden" \fi
13355 \the\Field@toks>%
13356 }%
13357 \Fld@default
13358 \HCode{</textarea>}%
13359 \else
13360 \HCode{<input type="text" %
13361 \ifFld@readonly readonly \fi
13362 id="\Fld@name" %
13363 name="\Fld@name" %
13364 \ifFld@hidden type="hidden" \fi
13365 value="\Fld@default" %
13366 \the\Field@toks>%
13367 }%
13368 \fi
13369 }
13370 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13371 \def\Fld@name{#2}%

```

```

13372 \let\Fld@default\ltx@empty
13373 \let\Hy@reserved@a\relax
13374 \begingroup
13375 \expandafter\Fld@findlength#3\\%
13376 \Field@toks={ }%
13377 \kvsetkeys{Field}{#1}%
13378 #2%
13379 \ifFld@radio
13380 \expandafter\@@Radio#3\\%
13381 \else
13382 \expandafter\@@Menu#3\\%
13383 \fi
13384 \endgroup
13385 }
13386 \def\Fld@findlength#1\\{%
13387 \Fld@menulength=0 %
13388 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13389 }
13390 \def\@@Menu#1\\{%
13391 \HCode{<select size="\the\Fld@menulength" %
13392 name="\Fld@name" %
13393 \the\Field@toks>%
13394 }%
13395 \@for\@curropt:=#1\do{%
13396 \expandafter\Fld@checkequals\@curropt==\\%
13397 \HCode{<option %
13398 \ifx\@curropt\Fld@default selected \fi
13399 value="\@currValue">\@currDisplay</option>%
13400 }%
13401 }%
13402 \HCode{</select>}%
13403 }
13404 \def\@@Radio#1\\{%
13405 \@for\@curropt:=#1\do{%
13406 \expandafter\Fld@checkequals\@curropt==\\%
13407 \HCode{<input type="radio" %
13408 \ifx\@curropt\Fld@default checked \fi
13409 name="\Fld@name" %
13410 value="\@currValue" %
13411 \the\Field@toks>%
13412 }%
13413 \@currDisplay
13414 }%
13415 }
13416 \def\@PushButton[#1]#2{% parameters, label
13417 \def\Fld@name{#2}%
13418 \bgroup
13419 \Field@toks={ }%
13420 \kvsetkeys{Field}{#1}%
13421 \HCode{<input type="button" %
13422 name="\Fld@name" %
13423 value="#2" %
13424 \the\Field@toks>%
13425 }%

```

```

13426 \HCode{</button>}%
13427 \egroup
13428 }
13429 \def\@Submit[#1]#2{%
13430 \HCode{<button type="submit">#2</button>}%
13431 }
13432 \def\@Reset[#1]#2{%
13433 \HCode{<button type="reset">#2</button>}%
13434 }
13435 \def\@CheckBox[#1]#2{% parameters, label
13436 \let\Hy@reserved@a\@empty
13437 \def\Fld@name{#2}%
13438 \def\Fld@default{0}%
13439 \bgroup
13440 \Field@toks={ }%
13441 \kvsetkeys{Field}{#1}%
13442 \HCode{<input type="checkbox" %
13443 \ifFld@checked checked \fi
13444 \ifFld@disabled disabled \fi
13445 \ifFld@readonly readonly \fi
13446 name="\Fld@name" %
13447 \ifFld@hidden type="hidden" \fi
13448 value="\Fld@default" %
13449 \the\Field@toks>%
13450 #2%
13451 }%
13452 \egroup
13453 }
13454 </tex4ht>

```

48.4 pdfTeX

```

13455 <*pdftex>
13456 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13457 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
13458 }
13459 \def\MakeFieldObject#1#2{\sbox0{#1}%
13460 \immediate\pdfxform0 %
13461 \expandafter\edef\csname #2Object\endcsname{%
13462 \the\pdflastxform\space 0 R%
13463 }%
13464 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13465 }%
13466 \let\HyField@afields\ltx@empty
13467 \let\HyField@cofields\ltx@empty
13468 \begingroup\expandafter\expandafter\expandafter\endgroup
13469 \expandafter\ifx\csname pdflastlink\endcsname\relax
13470 \let\HyField@AddToFields\relax
13471 \PackageInfo{hyperref}{%
13472 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13473 \MessageBreak
13474 Adobe Reader/Acrobat accepts an empty /Field array,%
13475 \MessageBreak
13476 but other PDF viewers might complain%
13477 }%

```

```

13478 \else
13479 \let\HyField@AuxAddToFields\ltx@gobble
13480 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13481 \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.
13482 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13483 \begingroup
13484 \Hy@safe@activetrue
13485 \let\ltx@secondoftwo\relax
13486 \ifx\HyField@cofields\ltx@empty
13487 \xdef\HyField@cofields{%
13488 \ltx@secondoftwo{#1}{ #2 0 R}%
13489 }%
13490 \else
13491 \let\ltx@secondoftwo\relax
13492 \def\HyField@AddCoField##1##2##3{%
13493 \ifx##1\ltx@empty
13494 \ltx@secondoftwo{#1}{ #2 0 R}%
13495 \expandafter\ltx@gobble
13496 \else
13497 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13498 \ltx@secondoftwo{#1}{ #2 0 R}%
13499 \ltx@secondoftwo{##2}{##3}%
13500 \expandafter\expandafter\expandafter\ltx@gobble
13501 \else
13502 \ltx@secondoftwo{##2}{##3}%
13503 \fi
13504 \fi
13505 \HyField@AddCoField
13506 }%
13507 \xdef\HyField@cofields{%
13508 \expandafter\HyField@AddCoField
13509 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13510 }%
13511 \fi
13512 \endgroup
13513 }%
13514 \Hy@AtBeginDocument{%
13515 \if@filesw
13516 \immediate\write\@mainaux{%
13517 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13518 }%
13519 \immediate\write\@mainaux{%
13520 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13521 }%
13522 \fi
13523 \let\HyField@AfterAuxOpen\@firstofone
13524 \def\HyField@AuxAddToFields#1{%
13525 \xdef\HyField@afields{%
13526 \ifx\HyField@afields\@empty
13527 \else
13528 \HyField@afields
13529 \space

```

```

13530     \fi
13531     #1 0 R%
13532   }%
13533 }%
13534 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13535 }%
13536 \def\HyField@AddToFields{%
13537   \expandafter\HyField@@AddToFields\expandafter{%
13538     \the\pdfastlink
13539   }%
13540   \ifx\Fld@calculate@code\ltx@empty
13541   \else
13542     \begingroup
13543     \Hy@safe@activetrue
13544     \edef\Hy@temp{%
13545       \endgroup
13546       \if@filesw
13547         \write\@mainaux{%
13548           \string\HyField@AuxAddToCoFields{%
13549             \Fld@calculate@sortkey
13550           }{%
13551             \the\pdfastlink
13552           }%
13553         }%
13554       \fi
13555     }%
13556     \Hy@temp
13557   \fi
13558 }%
13559 \def\HyField@@AddToFields#1{%
13560   \HyField@AfterAuxOpen{%
13561     \if@filesw
13562       \write\@mainaux{%
13563         \string\HyField@AuxAddToFields{#1}%
13564       }%
13565     \fi
13566   }%
13567 }%
13568 \fi
13569 \def\@Form[#1]{%
13570   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13571   \kvsetkeys{Form}{#1}%
13572   \pdf@ifdraftmode{}{%
13573     \Hy@FormObjects
13574     \ifnum\pdfTeXversion>13 %
13575       \pdfrefobj\OBJ@pdfdocencoding
13576       \pdfrefobj\OBJ@ZaDb
13577       \pdfrefobj\OBJ@Helv
13578     \fi
13579     \AtVeryEndDocument{%
13580       \immediate\pdfobj{%
13581         <<%
13582         /Fields[\HyField@afields]%
13583         \ifx\HyField@cofields\ltx@empty

```

```

13584     \else
13585     /CO[\romannumeral-`\Q\HyField@cofields]%
13586     \fi
13587     /DR<<%
13588     /Font<<%
13589     /ZaDb \OBJ@ZaDb\space 0 R%
13590     /Helv \OBJ@Helv\space 0 R%
13591     >>%
13592     >>%
13593     /DA(/Helv 10 Tf 0 g)%
13594     \ifHy@pdfa
13595     \else
13596     \ifHyField@NeedAppearances
13597     /NeedAppearances true%
13598     \fi
13599     \fi
13600     >>%
13601     }%
13602     \edef\OBJ@acroform{\the\pdflastobj}%
13603     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13604     }%
13605     }%
13606     \MakeFieldObject{%
Same as \ding{123} of package pifont.
13607     \begingroup
13608     \fontfamily{pzd}%
13609     \fontencoding{U}%
13610     \fontseries{m}%
13611     \fontshape{n}%
13612     \selectfont
13613     \char123 %
13614     \endgroup
13615     }{Ding}%
13616     \MakeFieldObject{%
13617     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13618     }{Submit}%
13619     \MakeFieldObject{%
13620     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13621     }{SubmitP}%
13622     }
13623     \let\@endForm\ltx@empty
13624     \let\HyAnn@AbsPageLabel\ltx@empty
13625     \let\Fld@pageobjref\ltx@empty
13626     \ltx@ifUndefined{pdfpageref}{%
13627     }{%
13628     \ltx@ifpackageloaded{zref-abspage}{%
13629     \newcount\HyAnn@Count
13630     \HyAnn@Count=\ltx@zero
13631     \def\HyAnn@AbsPageLabel{%
13632     \global\advance\HyAnn@Count by\ltx@one
13633     \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13634     \zref@refused{HyAnn@\the\HyAnn@Count}%
13635     }%
13636     \def\Fld@pageobjref{%

```

```

13637 \zref@ifrefundefined{HyAnn@the\HyAnn@Count}{%
13638 }{%
13639 \zref@ifrefcontainsprop{HyAnn@the\HyAnn@Count}{abspage}{%
13640 /P \pdfpageref
13641 \zref@extractdefault{HyAnn@the\HyAnn@Count}{abspage}{1} %
13642 \space 0 R%
13643 }{%
13644 }%
13645 }%
13646 }%
13647 }{%
13648 }%
13649 }

13650 \def\@TextField[#1]#2{% parameters, label
13651 \def\Fld@name{#2}%
13652 \let\Fld@default\ltx@empty
13653 \let\Fld@value\@empty
13654 \def\Fld@width{\DefaultWidthofText}%
13655 \def\Fld@height{%
13656 \ifFld@multiline
13657 \DefaultHeightofTextMultiline
13658 \else
13659 \DefaultHeightofText
13660 \fi
13661 }%
13662 \begingroup
13663 \expandafter\HyField@SetKeys\expandafter{%
13664 \DefaultOptionsofText,#1%
13665 }%
13666 \PDFForm@Name
13667 \HyField@FlagsText
13668 \ifFld@hidden\def\Fld@width{1sp}\fi
13669 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13670 \LayoutTextField{#2}{%
13671 \leavevmode
13672 \HyAnn@AbsPageLabel
13673 \Hy@escapeform\PDFForm@Text
13674 \pdfstartlink user {\PDFForm@Text}\relax
13675 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13676 \HyField@AddToFields
13677 }%
13678 \endgroup
13679 }

13680 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13681 \def\Fld@name{#2}%
13682 \let\Fld@default\relax
13683 \let\Fld@value\relax
13684 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13685 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13686 \begingroup
13687 \Fld@menulength=0 %
13688 \@tempdima\z@
13689 \@for\@curropt:=#3\do{%
13690 \expandafter\Fld@checkequals\@curropt==\\%

```



```

13691 \Hy@StepCount\Fld@menulength
13692 \settowidth{\@tempdimb}{\@currDisplay}%
13693 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13694 }%
13695 \advance\@tempdima by 15\p@
13696 \begingroup
13697 \HyField@SetKeys{#1}%
13698 \edef\x{\endgroup
13699 \noexpand\expandafter
13700 \noexpand\HyField@SetKeys
13701 \noexpand\expandafter{%
13702 \expandafter\noexpand\csname DefaultOptionsof%
13703 \ifFld@radio
13704 Radio%
13705 \else
13706 \ifFld@combo
13707 \ifFld@popdown
13708 PopdownBox%
13709 \else
13710 ComboBox%
13711 \fi
13712 \else
13713 ListBox%
13714 \fi
13715 \fi
13716 \endcsname
13717 }%
13718 }\x
13719 \HyField@SetKeys{#1}%
13720 \PDFForm@Name
13721 \ifFld@hidden\def\Fld@width{1sp}\fi
13722 \ifx\Fld@value\relax
13723 \let\Fld@value\Fld@default
13724 \fi
13725 \LayoutChoiceField{#2}{%
13726 \ifFld@radio
13727 \HyField@FlagsRadioButton
13728 \@@Radio{#3}%
13729 \else
13730 \begingroup
13731 \HyField@FlagsChoice
13732 \ifdim\Fld@width<\@tempdima
13733 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13734 \edef\Fld@width{\the\@tempdima}%
13735 \fi
13736 \ifFld@combo
13737 \else
13738 \@tempdima=\the\Fld@menulength\Fld@charsize
13739 \advance\@tempdima by \Fld@borderwidth bp %
13740 \advance\@tempdima by \Fld@borderwidth bp %
13741 \edef\Fld@height{\the\@tempdima}%
13742 \fi
13743 \@@ListBox{#3}%
13744 \endgroup

```

```

13745 \fi
13746 }%
13747 \endgroup
13748 }
13749 \def\@@Radio#1{%
13750 \Fld@listcount=0 %
13751 \EdefEscapeName\Fld@default{\Fld@default}%
13752 \@for\@curropt:=#1\do{%
13753 \expandafter\Fld@checkequals\@curropt==\%
13754 \EdefEscapeName\@currValue{\@currValue}%
13755 \Hy@StepCount\Fld@listcount
13756 \@currDisplay\space
13757 \leavevmode
13758 \HyAnn@AbsPageLabel
13759 \Hy@escapeform\PDFForm@Radio
13760 \pdfstartlink user {%
13761 \PDFForm@Radio
13762 /AP<<%
13763 /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.

```

13764 /\@currValue\space \DingObject
13765 >>%
13766 >>%
13767 }%
13768 \relax
13769 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13770 \ifnum\Fld@listcount=1 %
13771 \HyField@AddToFields
13772 \fi
13773 \space % deliberate space between radio buttons
13774 }%
13775 }
13776 \newcount\Fld@listcount
13777 \def\@@Listbox#1{%
13778 \HyField@PDFChoices{#1}%
13779 \leavevmode
13780 \HyAnn@AbsPageLabel
13781 \Hy@escapeform\PDFForm@List
13782 \pdfstartlink user {\PDFForm@List}\relax
13783 \MakeChoiceField{\Fld@width}{\Fld@height}%
13784 \pdfendlink
13785 \HyField@AddToFields
13786 }
13787 \def\@PushButton[#1]#2{% parameters, label
13788 \def\Fld@name{#2}%
13789 \begingroup
13790 \expandafter\HyField@SetKeys\expandafter{%
13791 \DefaultOptionsofPushButton,#1%
13792 }%
13793 \PDFForm@Name
13794 \ifHy@pdfa

```

```

13795 \Hy@Error{%
13796   PDF/A: Push button with JavaScript is prohibited%
13797 } \@ehc
13798 \LayoutPushButtonField{%
13799   \leavevmode
13800   \MakeButtonField{#2}%
13801 }%
13802 \else
13803   \HyField@FlagsPushButton
13804   \ifFld@hidden\def\Fld@width{1sp}\fi
13805   \LayoutPushButtonField{%
13806     \leavevmode
13807     \HyAnn@AbsPageLabel
13808     \Hy@escapeform\PDFForm@Push
13809     \pdfstartlink user {\PDFForm@Push}\relax
13810     \MakeButtonField{#2}%
13811     \pdfendlink
13812     \HyField@AddToFields
13813   }%
13814   \fi
13815 \endgroup
13816 }
13817 \def\@Submit[#1]#2{%
13818   \def\Fld@width{\DefaultWidthofSubmit}%
13819   \def\Fld@height{\DefaultHeightofSubmit}%
13820   \begingroup
13821     \expandafter\HyField@SetKeys\expandafter{%
13822       \DefaultOptionsofSubmit,#1%
13823     }%
13824     \HyField@FlagsPushButton
13825     \HyField@FlagsSubmit
13826     \ifFld@hidden\def\Fld@width{1sp}\fi
13827     \leavevmode
13828     \HyAnn@AbsPageLabel
13829     \Hy@escapeform\PDFForm@Submit
13830     \pdfstartlink user {%
13831       \PDFForm@Submit
13832       /AP<</N \SubmitObject/D \SubmitPObject>>%
13833     }%
13834     \relax
13835     \MakeButtonField{#2}%
13836     \pdfendlink
13837     \HyField@AddToFields
13838   \endgroup
13839 }
13840 \def\@Reset[#1]#2{%
13841   \def\Fld@width{\DefaultWidthofReset}%
13842   \def\Fld@height{\DefaultHeightofReset}%
13843   \begingroup
13844     \expandafter\HyField@SetKeys\expandafter{%
13845       \DefaultOptionsofReset,#1%
13846     }%
13847     \leavevmode
13848     \ifHy@pdfa

```

```

13849 \Hy@Error{%
13850     PDF/A: Reset action is prohibited%
13851 } \@ehc
13852 \MakeButtonField{#2}%
13853 \else
13854 \HyField@FlagsPushButton
13855 \ifFld@hidden\def\Fld@width{1sp}\fi
13856 \HyAnn@AbsPageLabel
13857 \Hy@escapeform\PDFForm@Reset
13858 \pdfstartlink user {\PDFForm@Reset}\relax
13859 \MakeButtonField{#2}%
13860 \pdfendlink
13861 \HyField@AddToFields
13862 \fi
13863 \endgroup
13864 }
13865 \def\@CheckBox[#1]#2{% parameters, label
13866 \def\Fld@name{#2}%
13867 \def\Fld@default{0}%
13868 \begingroup
13869 \def\Fld@width{\DefaultWidthofCheckBox}%
13870 \def\Fld@height{\DefaultHeightofCheckBox}%
13871 \expandafter\HyField@SetKeys\expandafter{%
13872 \DefaultOptionsofCheckBox,#1%
13873 }%
13874 \PDFForm@Name
13875 \HyField@FlagsCheckBox
13876 \ifFld@hidden\def\Fld@width{1sp}\fi
13877 \LayoutCheckField{#2}{%
13878 \leavevmode
13879 \HyAnn@AbsPageLabel
13880 \Hy@escapeform\PDFForm@Check
13881 \pdfstartlink user {\PDFForm@Check}\relax
13882 \MakeCheckField{\Fld@width}{\Fld@height}%
13883 \pdfendlink
13884 \HyField@AddToFields
13885 }%
13886 \endgroup
13887 }
13888 \def\Hy@FormObjects{%
13889 \pdfobj {%
13890 <<%
13891 /Type/Encoding%
13892 /Differences[%
13893 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13894 /ring/tilde %
13895 39/quotesingle %
13896 96/grave %
13897 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13898 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13899 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13900 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13901 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13902 160/Euro %

```

```

13903      164/currency %
13904      166/brokenbar %
13905      168/dieresis/copyright/ordfeminine %
13906      172/logicalnot/.notdef/registered/macron/degree/plusminus%
13907      /twosuperior/threesuperior/acute/mu %
13908      183/periodcentered/cedilla/onesuperior/ordmasculine %
13909      188/onequarter/onehalf/threequarters %
13910      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13911      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13912      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13913      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13914      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13915      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13916      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13917      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13918      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13919      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13920      ]%
13921      >>%
13922      }%
13923      \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13924      \pdfobj{%
13925      <<%
13926      /Type/Font%
13927      /Subtype/Type1%
13928      /Name/ZaDb%
13929      /BaseFont/ZapfDingbats%
13930      >>%
13931      }%
13932      \xdef\OBJ@ZaDb{\the\pdfastobj}%
13933      \pdfobj{%
13934      <<%
13935      /Type/Font%
13936      /Subtype/Type1%
13937      /Name/Helv%
13938      /BaseFont/Helvetica%
13939      /Encoding \OBJ@pdfdocencoding\space 0 R%
13940      >>%
13941      }%
13942      \xdef\OBJ@Helv{\the\pdfastobj}%
13943      \global\let\Hy@FormObjects\relax
13944      }
13945      </pdftex>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
13946 <*\dvipdfm | xetex>
```

```
\@Gauge
```

```

13947 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13948   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13949 }

```

\@Form

```
13950 \def\@Form[#1]{%
13951   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13952   \kvsetkeys{Form}{#1}%
13953   \Hy@FormObjects
13954   \@pdfm@mark{obj @afields []}%
13955   \@pdfm@mark{obj @corder []}%
13956   \@pdfm@mark{%
13957     obj @aform <<%
13958     /Fields @afields%
13959     /DR<<%
13960     /Font<<%
13961     /ZaDb @OBJZaDb%
13962     /Helv @OBJHelv%
13963     >>%
13964     >>%
13965     /DA(/Helv 10 Tf 0 g)%
13966     /CO @corder%
13967     \ifHy@pdfa
13968     \else
13969       \ifHyField@NeedAppearances
13970       /NeedAppearances true%
13971       \fi
13972     \fi
13973     >>%
13974   }%
13975   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13976 }
```

\@endForm

```
13977 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```
13978 \def\dvipdfm@setdim{%
13979   height \the\ht\pdfm@box\space
13980   width \the\wd\pdfm@box\space
13981   depth \the\dp\pdfm@box\space
13982 }
```

\HyField@AnnotCount

```
13983 \newcount\HyField@AnnotCount
13984 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13985 \def\HyField@AdvanceAnnotCount{%
13986   \global\advance\HyField@AnnotCount\@ne
13987 }
```

\HyField@TheAnnotCount

```
13988 \def\HyField@TheAnnotCount{%
13989   \the\HyField@AnnotCount
13990 }
```

\Fld@pageobjref

```
13991 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
13992 \def\HyField@AddToFields#1{%
13993   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13994   \ifx\Fld@calculate@code\ltx@empty
13995   \else
13996     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13997   \fi
13998 }
```

\@TextField

```
13999 \def\@TextField[#1]#2{% parameters, label
14000   \def\Fld@name{#2}%
14001   \let\Fld@default\ltx@empty
14002   \let\Fld@value\@empty
14003   \def\Fld@width{\DefaultWidthofText}%
14004   \def\Fld@height{%
14005     \ifFld@multiline
14006       \DefaultHeightofTextMultiline
14007     \else
14008       \DefaultHeightofText
14009     \fi
14010   }%
14011   \begingroup
14012     \expandafter\HyField@SetKeys\expandafter{%
14013       \DefaultOptionsofText,#1%
14014     }%
14015     \PDFForm@Name
14016     \HyField@FlagsText
14017     \ifFld@hidden\def\Fld@width{1sp}\fi
14018     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14019     \setbox\pdfm@box=\hbox{%
14020       \MakeTextField{\Fld@width}{\Fld@height}%
14021     }%
14022     \HyField@AdvanceAnnotCount
14023     \LayoutTextField{#2}{%
14024       \leavevmode
14025       \Hy@escapeform\PDFForm@Text
14026       \@pdfm@mark{%
14027         ann @text\HyField@TheAnnotCount\space
14028         \dvipdfm@setdim << \PDFForm@Text >>%
14029       }%
14030     }%
14031     \unhbox\pdfm@box
14032     \HyField@AddToFields{text}%
14033     % record in @afields array
14034   \endgroup
14035 }
```

\@ChoiceMenu

```
14036 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14037   \def\Fld@name{#2}%
```

```

14038 \let\Fld@default\relax
14039 \let\Fld@value\relax
14040 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14041 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14042 \begingroup
14043 \Fld@menulength=0 %
14044 \@tempdima\z@
14045 \@for\@curropt:=#3\do{%
14046 \expandafter\Fld@checkequals\@curropt==\%
14047 \Hy@StepCount\Fld@menulength
14048 \settowidth{\@tempdimb}{\@currDisplay}%
14049 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14050 }%
14051 \advance\@tempdima by 15\p@
14052 \begingroup
14053 \HyField@SetKeys{#1}%
14054 \edef\x{\endgroup
14055 \noexpand\expandafter
14056 \noexpand\HyField@SetKeys
14057 \noexpand\expandafter{%
14058 \expandafter\noexpand\csname DefaultOptionsof%
14059 \ifFld@radio
14060 Radio%
14061 \else
14062 \ifFld@combo
14063 \ifFld@popdown
14064 PopdownBox%
14065 \else
14066 ComboBox%
14067 \fi
14068 \else
14069 ListBox%
14070 \fi
14071 \fi
14072 \endcsname
14073 }%
14074 }\x
14075 \HyField@SetKeys{#1}%
14076 \PDFForm@Name
14077 \ifFld@hidden\def\Fld@width{1sp}\fi
14078 \ifx\Fld@value\relax
14079 \let\Fld@value\Fld@default
14080 \fi
14081 \LayoutChoiceField{#2}{%
14082 \ifFld@radio
14083 \HyField@FlagsRadioButton
14084 \@@Radio{#3}%
14085 \else
14086 \begingroup
14087 \HyField@FlagsChoice
14088 \ifdim\Fld@width<\@tempdima
14089 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14090 \edef\Fld@width{\the\@tempdima}%
14091 \fi

```



```

14092         \ifFld@combo
14093         \else
14094             \@tempdima=\the\Fld@menulength\Fld@charsize
14095             \advance\@tempdima by \Fld@borderwidth bp %
14096             \advance\@tempdima by \Fld@borderwidth bp %
14097             \edef\Fld@height{\the\@tempdima}%
14098         \fi
14099         \@@Listbox{#3}%
14100     \endgroup
14101 \fi
14102 }%
14103 \endgroup
14104 }

\@@Radio
14105 \def\@@Radio#1{%
14106     \Fld@listcount=0 %
14107     \EdefEscapeName\Fld@default{\Fld@default}%
14108     \setbox\pdfm@box=\hbox{%
14109         \MakeRadioField{\Fld@width}{\Fld@height}%
14110     }%
14111     \@for\@curropt:=#1\do{%
14112         \expandafter\Fld@checkequals\@curropt==\%
14113         \EdefEscapeName\@currValue{\@currValue}%
14114         \Hy@StepCount\Fld@listcount
14115         \@currDisplay\space
14116         \leavevmode
14117         \Hy@escapeform\PDFForm@Radio
14118         \ifnum\Fld@listcount=1 %
14119             \HyField@AdvanceAnnotCount
14120         \fi
14121         \@pdfm@mark{%
14122             ann %
14123             \ifnum\Fld@listcount=1 %
14124                 @radio\HyField@TheAnnotCount%
14125             \space
14126         \fi
14127         \dvipdfm@setdim
14128         <<%
14129         \PDFForm@Radio
14130         /AP<</N<</\@currValue /null>>>>%
14131         >>%
14132     }%
14133     \unhcopy\pdfm@box\space% deliberate space between radio buttons
14134     \ifnum\Fld@listcount=1 %
14135         \HyField@AddToFields{radio}%
14136     \fi
14137 }%
14138 }

\Fld@listcount
14139 \newcount\Fld@listcount

\@@Listbox

```

```

14140 \def\@@Listbox#1{%
14141   \HyField@PDFChoices{#1}%
14142   \setbox\pdfm@box=\hbox{%
14143     \MakeChoiceField{\Fld@width}{\Fld@height}%
14144   }%
14145   \leavevmode
14146   \Hy@escapeform\PDFForm@List
14147   \HyField@AdvanceAnnotCount
14148   \@pdfm@mark{%
14149     ann @list\HyField@TheAnnotCount\space
14150     \dvipdfm@setdim
14151     <<\PDFForm@List>>%
14152   }%
14153   \unhbox\pdfm@box
14154   \HyField@AddToFields{list}%
14155 }

```

\@PushButton

```

14156 \def\@PushButton[#1]#2{% parameters, label
14157   \def\Fld@name{#2}%
14158   \begingroup
14159     \expandafter\HyField@SetKeys\expandafter{%
14160       \DefaultOptionsofPushButton,#1%
14161     }%
14162     \PDFForm@Name
14163     \ifHy@pdfa
14164       \Hy@Error{%
14165         PDF/A: Push button with JavaScript is prohibited%
14166       }\@ehc
14167       \LayoutPushButtonField{%
14168         \leavevmode
14169         \MakeButtonField{#2}%
14170       }%
14171     \else
14172       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14173       \HyField@FlagsPushButton
14174       \ifFld@hidden\def\Fld@width{1sp}\fi
14175       \HyField@AdvanceAnnotCount
14176       \LayoutPushButtonField{%
14177         \leavevmode
14178         \Hy@escapeform\PDFForm@Push
14179         \@pdfm@mark{%
14180           ann @push\HyField@TheAnnotCount\space
14181           \dvipdfm@setdim
14182           <<\PDFForm@Push>>%
14183         }%
14184       }%
14185       \unhbox\pdfm@box
14186       \HyField@AddToFields{push}%
14187     \fi
14188   \endgroup
14189 }

```

\@Submit

```

14190 \def\@Submit[#1]#2{%
14191   \def\Fld@width{\DefaultWidthofSubmit}%
14192   \def\Fld@height{\DefaultHeightofSubmit}%
14193   \begingroup
14194     \expandafter\HyField@SetKeys\expandafter{%
14195       \DefaultOptionsofSubmit,#1%
14196     }%
14197     \HyField@FlagsPushButton
14198     \HyField@FlagsSubmit
14199     \ifFld@hidden\def\Fld@width{1sp}\fi
14200     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14201     \leavevmode
14202     \Hy@escapeform\PDFForm@Submit
14203     \HyField@AdvanceAnnotCount
14204     \@pdfm@mark{%
14205       ann @submit\HyField@TheAnnotCount\space
14206       \dvipdfm@setdim
14207       <<\PDFForm@Submit>>%
14208     }%
14209     \unhbox\pdfm@box%
14210     \HyField@AddToFields{submit}%
14211   \endgroup
14212 }

```

\@Reset

```

14213 \def\@Reset[#1]#2{%
14214   \def\Fld@width{\DefaultWidthofReset}%
14215   \def\Fld@height{\DefaultHeightofReset}%
14216   \begingroup
14217     \expandafter\HyField@SetKeys\expandafter{%
14218       \DefaultOptionsofReset,#1%
14219     }%
14220     \leavevmode
14221     \ifHy@pdfa
14222       \Hy@Error{%
14223         PDF/A: Reset action is prohibited%
14224       }\@ehc
14225       \MakeButtonField{#2}%
14226     \else
14227       \HyField@FlagsPushButton
14228       \ifFld@hidden\def\Fld@width{1sp}\fi
14229       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14230       \Hy@escapeform\PDFForm@Reset
14231       \HyField@AdvanceAnnotCount
14232       \@pdfm@mark{%
14233         ann @reset\HyField@TheAnnotCount\space
14234         \dvipdfm@setdim
14235         <<\PDFForm@Reset>>%
14236       }%
14237       \unhbox\pdfm@box
14238       \HyField@AddToFields{reset}%
14239     \fi
14240   \endgroup
14241 }

```

\@CheckBox

```
14242 \def\@CheckBox[#1]#2{% parameters, label
14243 \def\Fld@name{#2}%
14244 \def\Fld@default{0}%
14245 \begingroup
14246 \def\Fld@width{\DefaultWidthofCheckBox}%
14247 \def\Fld@height{\DefaultHeightofCheckBox}%
14248 \expandafter\HyField@SetKeys\expandafter{%
14249 \DefaultOptionsofCheckBox,#1%
14250 }%
14251 \PDFForm@Name
14252 \HyField@FlagsCheckBox
14253 \ifFld@hidden\def\Fld@width{1sp}\fi
14254 \setbox\pdfm@box=\hbox{%
14255 \MakeCheckField{\Fld@width}{\Fld@height}%
14256 }%
14257 \HyField@AdvanceAnnotCount
14258 \LayoutCheckField{#2}{%
14259 \leavevmode
14260 \Hy@escapeform\PDFForm@Check
14261 \@pdfm@mark{%
14262 ann @check\HyField@TheAnnotCount\space
14263 \dvi pdfm@setdim
14264 <<\PDFForm@Check>>%
14265 }%
14266 \unhbox\pdfm@box
14267 \HyField@AddToFields{check}%
14268 }%
14269 \endgroup
14270 }

14271 \def\Hy@FormObjects{%
14272 \@pdfm@mark{obj @OBJpdfdocencoding%
14273 <<%
14274 /Type/Encoding%
14275 /Differences[
14276 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14277 39/quotesingle %
14278 96/grave %
14279 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14280 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14281 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14282 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14283 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14284 160/Euro %
14285 164/currency %
14286 166/brokenbar %
14287 168/dieresis/copyright/ordfeminine %
14288 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14289 /twosuperior/threesuperior/acute/mu %
14290 183/periodcentered/cedilla/onesuperior/ordmasculine %
14291 188/onequarter/onehalf/threequarters %
14292 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14293 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
```

```

14294      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14295      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14296      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14297      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14298      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14299      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14300      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14301      /thorn/ydieresis%
14302      ]%
14303      >>%
14304      }%
14305      \@pdfm@mark{obj @OBJZaDb%
14306      <<%
14307      /Type/Font%
14308      /Subtype/Type1%
14309      /Name/ZaDb%
14310      /BaseFont/ZapfDingbats%
14311      >>%
14312      }%
14313      \@pdfm@mark{obj @OBJHelv%
14314      <<%
14315      /Type/Font%
14316      /Subtype/Type1%
14317      /Name/Helv%
14318      /BaseFont/Helvetica%
14319      /Encoding @OBJpdfdocencoding%
14320      >>%
14321      }%
14322      \global\let\Hy@FormObjects\relax
14323      }
14324      </dvipdfm | xetex>

```

48.6 Common forms part

```

14325      (*pdfform)

\Fld@pageobjref

14326      \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

14327      \begingroup\expandafter\expandafter\expandafter\endgroup
14328      \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14329      \let\Hy@escapestring\@firstofone
14330      \def\Hy@escapeform#1{%
14331      \ifHy@pdfescapeform
14332      \def\Hy@escapestring##1{%
14333      \noexpand\Hy@escapestring{\noexpand##1}%
14334      }%
14335      \edef\Hy@temp{#1}%
14336      \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14337      \def\Hy@escapestring##1{%
14338      \@ifundefined{Hy@esc@\string##1}{%
14339      ##1%
14340      \ThisShouldNotHappen

```

```

14341     }{%
14342     \csname Hy@esc@\string##1\endcsname
14343     }%
14344     }%
14345     \else
14346     \let\Hy@escapestring\@firstofone
14347     \fi
14348     }%
14349     \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14350     \ifx\\#3\\%
14351     \else
14352     \expandafter
14353     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14354     \ltx@ReturnAfterFi{%
14355     \Hy@@escapeform#3\@nil
14356     }%
14357     \fi
14358     }%
14359     \else
14360     \def\Hy@escapeform#1{%
14361     \ifHy@pdfescapeform
14362     \let\Hy@escapestring\pdfescapestring
14363     \else
14364     \let\Hy@escapestring\@firstofone
14365     \fi
14366     }%
14367     \Hy@escapeform{}%
14368     \fi

```

\PDFForm@Name

```

14369 \def\PDFForm@Name{%
14370 \PDFForm@@Name\Fld@name
14371 \ifx\Fld@altname\relax
14372 \else
14373 \PDFForm@@Name\Fld@altname
14374 \fi
14375 \ifx\Fld@mappingname\relax
14376 \else
14377 \PDFForm@@Name\Fld@mappingname
14378 \fi
14379 }

```

\PDFForm@@Name

```

14380 \def\PDFForm@@Name#1{%
14381 \begingroup
14382 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
14383 \ifHy@unicode
14384 \Hy@unicodedefalse
14385 \fi
14386 \fi
14387 \pdfstringdef\Hy@gtemp#1%
14388 \endgroup
14389 \let#1\Hy@gtemp
14390 }

```

\Fld@additionalactions

```
14391 \def\Fld@@additionalactions{%
```

K input (keystroke) format

```
14392 \ifx\Fld@keystroke@code\@empty
```

```
14393 \else
```

```
14394 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
```

```
14395 \fi
```

F display format

```
14396 \ifx\Fld@format@code\@empty
```

```
14397 \else
```

```
14398 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
```

```
14399 \fi
```

V validation

```
14400 \ifx\Fld@validate@code\@empty
```

```
14401 \else
```

```
14402 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
```

```
14403 \fi
```

C calculation

```
14404 \ifx\Fld@calculate@code\@empty
```

```
14405 \else
```

```
14406 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
```

```
14407 \fi
```

Fo receiving the input focus

```
14408 \ifx\Fld@onfocus@code\@empty
```

```
14409 \else
```

```
14410 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
```

```
14411 \fi
```

Bl loosing the input focus (blurred)

```
14412 \ifx\Fld@onblur@code\@empty
```

```
14413 \else
```

```
14414 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
```

```
14415 \fi
```

D pressing the mouse button (down)

```
14416 \ifx\Fld@onmousedown@code\@empty
```

```
14417 \else
```

```
14418 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
```

```
14419 \fi
```

U releasing the mouse button (up)

```
14420 \ifx\Fld@onmouseup@code\@empty
```

```
14421 \else
```

```
14422 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
```

```
14423 \fi
```

E cursor enters the annotation's active area.

```
14424 \ifx\Fld@onenter@code\@empty
```

```
14425 \else
```

```
14426 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
```

```
14427 \fi
```

X cursor exits the annotation's active area.

```
14428 \ifx\Fld@onexit@code\@empty
14429 \else
14430 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14431 \fi
14432 }
14433 \def\Fld@additionalactions{%
14434 \if-\Fld@@additionalactions-%
14435 \else
14436 \ifHy@pdfa
14437 \else
14438 /AA<<\Fld@@additionalactions>>%
14439 \fi
14440 \fi
14441 }
```

\Fld@annotnames

```
14442 \def\Fld@annotnames{%
14443 /T(\Fld@name)%
14444 \ifx\Fld@altname\relax
14445 \else
14446 /TU(\Fld@altname)%
14447 \fi
14448 \ifx\Fld@mappingname\relax
14449 \else
14450 /TM(\Fld@mappingname)%
14451 \fi
14452 }
```

\PDFForm@Check

```
14453 \def\PDFForm@Check{%
14454 /Subtype/Widget%
14455 \Fld@annotflags
14456 \Fld@pageobjref
14457 \Fld@annotnames
14458 /FT/Btn%
14459 \Fld@flags
14460 /Q \Fld@align
14461 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14462 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14463 /MK<<%
14464 \ifnum\Fld@rotation=\z@
14465 \else
14466 /R \Fld@rotation
14467 \fi
14468 \ifx\Fld@bordercolor\relax
14469 \else
14470 /BC[\Fld@bordercolor]%
14471 \fi
14472 \ifx\Fld@bcolor\relax
14473 \else
14474 /BG[\Fld@bcolor]%
14475 \fi
14476 /CA(\Hy@escapestring{\Fld@cbsymbol})%
```



```

14477 >>%
14478 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14479 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14480 /H/P%
14481 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14482 \Fld@additionalactions
14483 }

```

\PDFForm@Push

```

14484 \ifHy@pdfa
14485 \else
14486 \def\PDFForm@Push{%
14487 /Subtype/Widget%
14488 \Fld@annotflags
14489 \Fld@pageobjref
14490 \Fld@annotnames
14491 /FT/Btn%
14492 \Fld@flags
14493 /H/P%
14494 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14495 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14496 \ifx\Fld@bordercolor\relax\else 1\fi
14497 \space
14498 \else
14499 /MK<<%
14500 \ifnum\Fld@rotation=\z@
14501 \else
14502 /R \Fld@rotation
14503 \fi
14504 \ifx\Fld@bordercolor\relax
14505 \else
14506 /BC[\Fld@bordercolor]%
14507 \fi
14508 >>%
14509 \fi
14510 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14511 \Fld@additionalactions
14512 }%
14513 \fi

```

\PDFForm@List

```

14514 \def\PDFForm@List{%
14515 /Subtype/Widget%
14516 \Fld@annotflags
14517 \Fld@pageobjref
14518 \Fld@annotnames
14519 /FT/Ch%
14520 \Fld@flags
14521 /Q \Fld@align
14522 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14523 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14524 \ifx\Fld@bordercolor\relax\else 1\fi
14525 \ifx\Fld@bcolor\relax \else 1\fi
14526 \space

```

```

14527 \else
14528 /MK<<%
14529 \ifnum\Fld@rotation=\z@
14530 \else
14531 /R \Fld@rotation
14532 \fi
14533 \ifx\Fld@bordercolor\relax
14534 \else
14535 /BC[\Fld@bordercolor]%
14536 \fi
14537 \ifx\Fld@bcolor\relax
14538 \else
14539 /BG[\Fld@bcolor]%
14540 \fi
14541 >>%
14542 \fi
14543 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14544 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14545 \Fld@choices
14546 \Fld@additionalactions
14547 }

```

\PDFForm@Radio

```

14548 \def\PDFForm@Radio{%
14549 /Subtype/Widget%
14550 \Fld@annotflags
14551 \Fld@pageobjref
14552 \Fld@annotnames
14553 /FT/Btn%
14554 \Fld@flags
14555 /H/P%
14556 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14557 /MK<<%
14558 \ifnum\Fld@rotation=\z@
14559 \else
14560 /R \Fld@rotation
14561 \fi
14562 \ifx\Fld@bordercolor\relax
14563 \else
14564 /BC[\Fld@bordercolor]%
14565 \fi
14566 \ifx\Fld@bcolor\relax
14567 \else
14568 /BG[\Fld@bcolor]%
14569 \fi
14570 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14571 >>%
14572 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14573 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14574 \ifx\Fld@default\@empty
14575 /V/Off%
14576 /DV/Off%

```

```

14577 \else
14578 /V/\Fld@default
14579 /DV/\Fld@default
14580 \fi
14581 \Fld@additionalactions
14582 }

```

\PDFForm@Text

```

14583 \def\PDFForm@Text{%
14584 /Subtype/Widget%
14585 \Fld@annotflags
14586 \Fld@pageobjref
14587 \Fld@annotnames
14588 /FT/Tx%
14589 \Fld@flags
14590 /Q \Fld@align
14591 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14592 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14593     \ifx\Fld@bordercolor\relax\else 1\fi
14594     \ifx\Fld@bcolor\relax \else 1\fi
14595     \space
14596 \else
14597 /MK<<%
14598     \ifnum\Fld@rotation=\z@
14599     \else
14600     /R \Fld@rotation
14601     \fi
14602     \ifx\Fld@bordercolor\relax
14603     \else
14604     /BC[\Fld@bordercolor]%
14605     \fi
14606     \ifx\Fld@bcolor\relax
14607     \else
14608     /BG[\Fld@bcolor]%
14609     \fi
14610     >>%
14611 \fi
14612 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14613     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14614 /DV(\Hy@escapestring{\Fld@default})%
14615 /V(\Hy@escapestring{\Fld@value})%
14616 \Fld@additionalactions
14617 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14618 }

```

\PDFForm@Submit

```

14619 \def\PDFForm@Submit{%
14620 /Subtype/Widget%
14621 \Fld@annotflags
14622 \Fld@pageobjref
14623 \Fld@annotnames
14624 /FT/Btn%
14625 \Fld@flags
14626 /H/P%

```

```

14627 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14628 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14629     \ifx\Fld@bordercolor\relax\else 1\fi
14630     \space
14631 \else
14632 /MK<<%
14633     \ifnum\Fld@rotation=\z@
14634     \else
14635     /R \Fld@rotation
14636     \fi
14637     \ifx\Fld@bordercolor\relax
14638     \else
14639     /BC[\Fld@bordercolor]%
14640     \fi
14641 >>%
14642 \fi
14643 /A<<%
14644 /S/SubmitForm%
14645 /F<<%
14646 /FS/URL%
14647 /F(\Hy@escapestring{\Form@action})%
14648 >>%
14649 \Fld@submitflags
14650 >>%
14651 \Fld@additionalactions
14652 }

```

\PDFForm@Reset

```

14653 \ifHy@pdfa
14654 \else
14655 \def\PDFForm@Reset{%
14656 /Subtype/Widget%
14657 \Fld@annotflags
14658 \Fld@pageobjref
14659 \Fld@annotnames
14660 /FT/Btn%
14661 \Fld@flags
14662 /H/P%
14663 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14664 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14665     \ifx\Fld@bordercolor\relax\else 1\fi
14666     \space
14667 \else
14668 /MK<<%
14669     \ifnum\Fld@rotation=\z@
14670     \else
14671     /R \Fld@rotation
14672     \fi
14673     \ifx\Fld@bordercolor\relax
14674     \else
14675     /BC[\Fld@bordercolor]%
14676     \fi
14677 % /CA (Clear)
14678 % /AC (Done)

```

```

14679     >>%
14680     \fi
14681     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14682     /A<</S/ResetForm>>%
14683     \Fld@additionalactions
14684   }%
14685 \fi

14686 </pdfform>
14687 <*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`

```

14688 \def\phantomsection{%
14689   \Hy@MakeCurrentHrefAuto{section*}%
14690   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14691 }
14692 </package>

```

49.1 Bookmarks

```
14693 <*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.

```

14694 \def\Hy@writebookmark#1#2#3#4#5{%
14695   % section number, text, label, level, file
14696   \ifx\WriteBookmarks\relax%
14697     \else

```

```

14698 \ifnum#4>\Hy@bookmarksdepth\relax
14699 \else
14700 \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14701 \fi
14702 \fi
14703 }
14704 \def\Hy@currentbookmarklevel{0}
14705 \def\Hy@numberline#1{#1 }
14706 \def\@@writetorep#1#2#3#4#5{%
14707 \begingroup
14708 \edef\Hy@tempa{#5}%
14709 \ifx\Hy@tempa\Hy@bookmarkstype
14710 \edef\Hy@level{#4}%
14711 \ifx\Hy@levelcheck Y%
14712 \@tempcnta\Hy@level\relax
14713 \advance\@tempcnta by -1 %
14714 \ifnum\Hy@currentbookmarklevel<\@tempcnta
14715 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14716 \advance\@tempcnta by 1 %
14717 \Hy@Warning{%
14718 Difference (\the\@tempcnta) between bookmark levels is %
14719 greater \MessageBreak than one, level fixed%
14720 }%
14721 \@tempcnta\Hy@currentbookmarklevel
14722 \advance\@tempcnta by 1 %
14723 \edef\Hy@level{\the\@tempcnta}%
14724 \fi
14725 \else
14726 \global\let\Hy@levelcheck Y%
14727 \fi
14728 \global\let\Hy@currentbookmarklevel\Hy@level
14729 \@tempcnta\Hy@level\relax
14730 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14731 \advance\@tempcnta by -1 %
14732 \edef\Hy@tempa{#3}%
14733 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14734 \ifx\Hy@tempa\Hy@tempb
14735 \Hy@Warning{%
14736 The anchor of a bookmark and its parent's must not%
14737 \MessageBreak be the same. Added a new anchor%
14738 }%
14739 \phantomsection
14740 \fi
14741 \ifHy@bookmarksnumbered
14742 \let\numberline\Hy@numberline
14743 \let\booknumberline\Hy@numberline
14744 \let\partnumberline\Hy@numberline
14745 \let\chapternumberline\Hy@numberline
14746 \else
14747 \let\numberline\@gobble
14748 \let\booknumberline\@gobble
14749 \let\partnumberline\@gobble
14750 \let\chapternumberline\@gobble
14751 \fi

```

```

14752 \pdfstringdef\Hy@tempa{#2}%
14753 \HyPsd@SanitizeForOutFile\Hy@tempa
14754 \if@filesw
14755 \stepcounter{bookmark@seq@number}%
14756 \@ifundefined{@outlinefile}{%
14757 }{%
14758 \protected@write\@outlinefile{ }{%
14759 \protect\BOOKMARK
14760 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14761 {\Hy@tempa}{\Hy@tempb}%
14762 \@percentchar\space\thebookmark@seq@number
14763 }%
14764 }%
14765 \fi
14766 \fi
14767 \endgroup
14768 }
14769 \newcounter{bookmark@seq@number}

14770 \begingroup
14771 \lccode`=(`{%
14772 \lccode`=)`}%
14773 \lccode`1=\z@
14774 \lccode`2=\z@
14775 \lccode`3=\z@
14776 \lccode`5=\z@
14777 \lccode`7=\z@
14778 \lccode`#\=\z@
14779 \lccode``=\z@
14780 \lccode`\{=\z@
14781 \lccode`\}= \z@
14782 \lowercase{%
14783 \endgroup
14784 \def\HyPsd@SanitizeForOutFile#1{%
14785 \@onelevel@sanitize\Hy@tempa
14786 \escapechar`\\%
14787 \edef\Hy@tempa{%
14788 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
14789 }%
14790 \edef\Hy@tempa{%
14791 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
14792 }%
14793 }%
14794 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14795 #1%
14796 \ifx\`#2\\%
14797 \expandafter\ltx@gobble
14798 \else
14799 \expandafter\ltx@firstofone
14800 \fi
14801 {%
14802 \string\173%
14803 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14804 }%
14805 }%

```

```

14806 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14807   #1%
14808   \ifx\|#2\|%
14809     \expandafter\ltx@gobble
14810   \else
14811     \expandafter\ltx@firstofone
14812   \fi
14813   {%
14814     \string\175%
14815     \HyPsd@SanitizeOut@BraceRight#2\@nil
14816   }%
14817 }%
14818 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14819 \newcommand{\currentpdfbookmark}{%
14820   \pdfbookmark[\Hy@currentbookmarklevel]%
14821 }
14822 \newcommand{\subpdfbookmark}{%
14823   \@tempcnta\Hy@currentbookmarklevel
14824   \Hy@StepCount\@tempcnta
14825   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14826 }
14827 \newcommand{\belowpdfbookmark}[2]{%
14828   \@tempcnta\Hy@currentbookmarklevel
14829   \Hy@StepCount\@tempcnta
14830   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14831   \advance\@tempcnta by -1 %
14832   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14833 }

```

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.

```

14834 \renewcommand\pdfbookmark[3][0]{%
14835   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14836   \hyper@anchorstart{#3.#1}\hyper@anchorend
14837 }
14838 \def\BOOKMARK{%
14839   \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14840 }
14841 \def\@BOOKMARK[#1]{%
14842   \@ifnextchar{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
14843 }

```

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`

```

14844 \RequirePackage{rerunfilecheck}[2009/12/10]
14845 \def\Hy@OutlineRerunCheck{%
14846   \RerunFileCheck{\jobname.out}{%

```



```

14847 \immediate\closeout\@outlinefile
14848 }{%
14849 Rerun to get outlines right\MessageBreak
14850 or use package `bookmark'%
14851 }%
14852 }

```

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.

```

14853 (*vtex)
14854 \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.

```

14855 \begingroup
14856 \catcode\`'=12 %
14857 \ifnum\Hy@VTeXversion<650 %
14858 \catcode\`=12 %
14859 \gdef\hv@pdf@char#1#2#3{%
14860 \char
14861 \ifcase'#1#2#3 %
14862 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14863 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14864 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14865 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14866 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14867 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14868 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14869 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14870 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14871 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14872 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14873 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14874 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14875 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14876 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14877 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14878 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14879 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14880 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14881 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14882 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14883 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14884 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14885 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14886 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14887 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14888 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%

```

```

14889 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14890 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14891 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14892 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14893 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14894 \fi
14895 }%
14896 \else
14897 \gdef\hv@pdf@char{\char'}%
14898 \fi
14899 \endgroup

```

\@@BOOKMARK

```

14900 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14901 \expandafter\edef\csname @count@#3\endcsname{%
14902 \the\@serial@counter
14903 }%
14904 \edef\@mycount{\the\@serial@counter}%
14905 \Hy@StepCount\@serial@counter
14906 \edef\@parcount{%
14907 \expandafter\ifx\csname @count@#5\endcsname\relax
14908 0%
14909 \else
14910 \csname @count@#5\endcsname
14911 \fi
14912 }%
14913 \immediate\special{%
14914 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14915 s=\ifx#2-c\else o\fi,t=#4%
14916 }%
14917 }%

```

\ReadBookmarks

```

14918 \def\ReadBookmarks{%
14919 \begingroup
14920 \def\0{\hv@pdf@char 0}%
14921 \def\1{\hv@pdf@char 1}%
14922 \def\2{\hv@pdf@char 2}%
14923 \def\3{\hv@pdf@char 3}%
14924 \def\({}%
14925 \def\)}%
14926 \def\do##1{%
14927 \ifnum\catcode`##1=\active
14928 \@makeother##1%
14929 \else
14930 \ifnum\catcode`##1=6 %
14931 \@makeother##1%
14932 \fi
14933 \fi
14934 }%
14935 \dospecials
14936 \Hy@safe@activetrue
14937 \InputIfFileExists{\jobname.out}{\}{}%
14938 \endgroup

```

```

14939 \ifx\WriteBookmarks\relax
14940 \else
14941 \if@filesw
14942 \newwrite\@outlinefile
14943 \Hy@OutlineRerunCheck
14944 \immediate\openout\@outlinefile=\jobname.out\relax
14945 \ifHy@typexml
14946 \immediate\write\@outlinefile{<relaxxml>\relax}%
14947 \fi
14948 \fi
14949 \fi
14950 }

14951 </vtex>

14952 <*\vtex>
14953 \def\ReadBookmarks{%
14954 \pdf@ifdraftmode{ }{%
14955 \begingroup
14956 \def\do##1{%
14957 \ifnum\catcode`##1=\active
14958 \@makeother##1%
14959 \else
14960 \ifnum\catcode`##1=6 %
14961 \@makeother##1%
14962 \fi
14963 \fi
14964 }%
14965 \dospecials
14966 \Hy@safe@activetrue
14967 \escapechar=`\%
14968 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14969 \calc@bm@number{##5}%
14970 }%
14971 \InputIfFileExists{\jobname.out}{ }{%
14972 \ifx\WriteBookmarks\relax
14973 \global\let\WriteBookmarks\relax
14974 \fi
14975 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14976 \def\Hy@temp{##4}%
14977 <*\pdfTeX>
14978 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14979 \Hy@OutlineName{ }\Hy@pstringName{%
14980 ##2\check@bm@number{##3}%
14981 }{%
14982 \expandafter\strip@prefix\meaning\Hy@temp
14983 }%
14984 </pdfTeX>
14985 <*\pdfmark>
14986 \pdfmark{%
14987 pdfmark=/OUT,%
14988 Count={##2\check@bm@number{##3}},%
14989 Dest={##3},%
14990 Title=\expandafter\strip@prefix\meaning\Hy@temp
14991 }%

```

```

14992 </pdfmark>
14993 <{*dvipdfm | xetex>
14994     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14995     \@pdfm@mark{%
14996         outline \ifHy@DvipdfmxOutlineOpen
14997             [%
14998             \ifnum##21>\z@
14999             \else
15000             -%
15001             \fi
15002             ] %
15003             \fi
15004             ##1<<%
15005             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15006             /A<<%
15007             /S/GoTo%
15008             /D(\Hy@pstringName)%
15009             >>%
15010             >>%
15011             }%
15012 </dvipdfm | xetex>
15013     }%
15014     \begingroup
15015     \def\WriteBookmarks{0}%
15016     \InputIfFileExists{jobname.out}{-}{-}%
15017     \endgroup
15018     %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
15019     \endgroup
15020 }%
15021 \ifx\WriteBookmarks\relax
15022 \else
15023     \if@filesw
15024         \newwrite\@outlinefile
15025         \Hy@OutlineRerunCheck
15026         \immediate\openout\@outlinefile=jobname.out\relax
15027         \ifHy@typexml
15028             \immediate\write\@outlinefile{<relaxxml>\relax}%
15029         \fi
15030     \fi
15031     \fi
15032 }
15033 <{*pdftex>
15034 \def\Hy@OutlineName#1#2#3#4{%
15035     \pdfoutline goto name{#2}count#3{#4}%
15036 }
15037 </pdftex>
15038 \def\check@bm@number#1{%
15039     \expandafter\ifx\csname B_#1\endcsname\relax
15040         0%
15041     \else
15042         \csname B_#1\endcsname
15043     \fi
15044 }
15045 \def\calc@bm@number#1{%

```

```

15046 \@tempcnta=\check@bm@number{#1}\relax
15047 \advance\@tempcnta by 1 %
15048 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15049 }
15050 \</!vtex>

15051 \ifHy@implicit
15052 \else
15053 \expandafter\endinput
15054 \fi

15055 \</outlines>
15056 \<*outlines | hypertex>

15057 \newlength\Hy@SectionHShift
15058 \def\Hy@SectionAnchorHref#1{%
15059 \ifx\protect\@typeset@protect
15060 \Hy@@SectionAnchor{#1}%
15061 \fi
15062 }
15063 \DeclareRobustCommand*\Hy@@SectionAnchor[1]{%
15064 \leavevmode
15065 \hbox to 0pt{%
15066 \kern-\Hy@SectionHShift
15067 \Hy@raisedlink{%
15068 \hyper@anchorstart{#1}\hyper@anchorend
15069 }%
15070 \hss
15071 }%
15072 }
15073 \let\H@old@ssect\@ssect
15074 \def\@ssect#1#2#3#4#5{%
15075 \Hy@MakeCurrentHrefAuto{section*}%
15076 \setlength{\Hy@SectionHShift}{#1}%
15077 \begingroup
15078 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15079 \toks\tw@\expandafter{%
15080 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15081 #5%
15082 }%
15083 \edef\x{\endgroup
15084 \the\toks@\the\toks\tw@}%
15085 }\x
15086 }
15087 \let\H@old@schapter\@schapter
15088 \def\@schapter#1{%
15089 \begingroup
15090 \let\@mkboth\@gobbletwo
15091 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15092 \Hy@raisedlink{%
15093 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15094 }%
15095 \endgroup
15096 \H@old@schapter{#1}%
15097 }

```

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:

```

15098 \ltx@ifundefined{@chapter}{%}{%
15099   \let\Hy@org@chapter\@chapter
15100   \def\@chapter{%
15101     \def\Hy@next{%
15102       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15103       \Hy@raisedlink{%
15104         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15105       }%
15106     }%
15107     \ifnum\c@secnumdepth>\m@ne
15108       \ltx@ifundefined{if@mainmatter}%
15109       \iftrue{\csname if@mainmatter\endcsname}%
15110       \let\Hy@next\relax
15111     \fi
15112   \fi
15113   \Hy@next
15114   \Hy@org@chapter
15115 }%
15116 }

15117 \let\H@old@part\@part
15118 \begingroup\expandafter\expandafter\expandafter\endgroup
15119 \expandafter\ifx\csname chapter\endcsname\relax
15120   \let\Hy@secnum@part\z@
15121 \else
15122   \let\Hy@secnum@part\m@ne
15123 \fi
15124 \def\@part{%
15125   \ifnum\Hy@secnum@part>\c@secnumdepth
15126     \phantomsection
15127   \fi
15128   \H@old@part
15129 }

15130 \let\H@old@spart\@spart
15131 \def\@spart#1{%
15132   \Hy@MakeCurrentHrefAuto{part*}%
15133   \Hy@raisedlink{%
15134     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15135   }%
15136   \H@old@spart{#1}%
15137 }

15138 \let\H@old@sect\@sect
15139 \def\@sect#1#2#3#4#5#6[#7]#8{%
15140   \ifnum #2>\c@secnumdepth
15141     \expandafter\@firstoftwo
15142   \else
15143     \expandafter\@secondoftwo
15144   \fi
15145   {%
15146     \Hy@MakeCurrentHrefAuto{section*}%
15147     \setlength{\Hy@SectionHShift}{#3}%
15148     \begingroup

```

```

15149 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}}%
15150 \toks\tw@\expandafter{%
15151 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15152 #8%
15153 }%
15154 \edef\x{\endgroup
15155 \the\toks@{\the\toks\tw@}%
15156 }\x
15157 }{%
15158 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}{#8}%
15159 }%
15160 }

15161 </outlines | hypertex>
15162 <*outlines>

15163 \expandafter\def\csname Parent-4\endcsname{}
15164 \expandafter\def\csname Parent-3\endcsname{}
15165 \expandafter\def\csname Parent-2\endcsname{}
15166 \expandafter\def\csname Parent-1\endcsname{}
15167 \expandafter\def\csname Parent0\endcsname{}
15168 \expandafter\def\csname Parent1\endcsname{}
15169 \expandafter\def\csname Parent2\endcsname{}
15170 \expandafter\def\csname Parent3\endcsname{}
15171 \expandafter\def\csname Parent4\endcsname{}

15172 </outlines>

```

50 Compatibility with koma-script classes

```

15173 <*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.

```

15174 \def\Hy@tempa{%
15175 \def\@addchap{##1}##2{%
15176 \typeout{##2}%
15177 \if@twoside
15178 \@mkboth{##1}{}%
15179 \else
15180 \@mkboth{}{##1}%
15181 \fi
15182 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15183 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15184 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15185 \Hy@raisedlink{%
15186 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15187 }%
15188 \if@twocolumn
15189 \@topnewpage[\@makeschapterhead{##2}]%
15190 \else
15191 \@makeschapterhead{##2}%
15192 \@afterheading

```

```

15193 \fi
15194 \addcontentsline{toc}{chapter}{###1}%
15195 }%
15196 }
15197 \@ifclassloaded{scrbook}{%
15198 \@ifclasslater{scrbook}{2001/01/01}{%
15199 \let\Hy@tempa\@empty
15200 }{}%
15201 }{%
15202 \@ifclassloaded{scrreprt}{%
15203 \@ifclasslater{scrreprt}{2001/01/01}{%
15204 \let\Hy@tempa\@empty
15205 }{}%
15206 }{%
15207 \let\Hy@tempa\@empty
15208 }%
15209 }%
15210 \Hy@tempa
15211 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15212 <*pd1enc>
15213 \DeclareFontEncoding{PD1}{}{}

Accents
15214 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15215 \DeclareTextAccent{\'}{PD1}{\textacute}
15216 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
15217 \DeclareTextAccent{\~}{PD1}{\texttilde}
15218 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15219 \DeclareTextAccent{\r}{PD1}{\textstring}
15220 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15221 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15222 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15223 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15224 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15225 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15226 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15227 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15228 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
15229 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15230 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15231 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textstring}
15232 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15233 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15234 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15235 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15236 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}

```



```

15237 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15238 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15239 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15240 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15241 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15242 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15243 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15244 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15245 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15246 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15247 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15248 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15249 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15250 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15251 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15252 \DeclareTextCommand{\newtie}{PD1}[1]{%
15253   \TextSymbolUnavailable{\newtie{#1}}#1%
15254 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15255 % U+0009 (CHARACTER TABULATION)
15256 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15257 % U+000A (LINE FEED)
15258 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15259 % U+000D (CARRIAGE RETURN)
15260 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15261 % U+02D8 BREVE; breve
15262 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15263 % U+02C7 CARON; caron
15264 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15265 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15266 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15267 % U+02D9 DOT ABOVE; dotaccent
15268 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15269 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15270 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15271 % U+02DB OGONEK; ogonek
15272 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15273 % U+02DA RING ABOVE; ring
15274 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15275 % U+02DC SMALL TILDE; ilde, *tilde
15276 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

15277 % U+0022 QUOTATION MARK; quotedbl
15278 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15279 % U+0023 NUMBER SIGN; numbersign
15280 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15281 % U+0024 DOLLAR SIGN; dollar
15282 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15283 % U+0025 PERCENT SIGN; percent
15284 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025

```

15285 % U+0026 AMPERSAND; ampersand
 15286 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15287 % U+0028 LEFT PARENTHESIS; parenleft
 15288 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 15289 % U+0029 RIGHT PARENTHESIS; parenright
 15290 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 15291 % U+002E FULL STOP; period
 15292 \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
 15293 % U+003C LESS-THAN SIGN; less
 15294 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15295 % U+003E GREATER-THAN SIGN; greater
 15296 \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
 15297 % U+005C REVERSE SOLIDUS; backslash
 15298 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15299 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15300 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15301 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15302 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15303 % U+005F LOW LINE; underscore
 15304 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15305 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15306 % U+0060 GRAVE ACCENT; grave
 15307 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15308 % U+0069 LATIN SMALL LETTER I; i
 15309 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

\152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15310 % U+007B LEFT CURLY BRACKET; braceleft
 15311 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15312 % U+007C VERTICAL LINE; *bar, verticalbar
 15313 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15314 % U+007D RIGHT CURLY BRACKET; braceright
 15315 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15316 % U+007E TILDE; asciitilde
 15317 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15318 % U+2022 BULLET; bullet
 15319 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15320 % U+2020 DAGGER; dagger
 15321 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15322 % U+2021 DOUBLE DAGGER; daggerdbl, \ddagger (LaTeX)
 15323 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15324 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15325 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15326 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15327 % U+2014 EM DASH; emdash
 15328 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15329 % U+2013 EN DASH; endash
 15330 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15331 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15332 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15333 % U+2044 FRACTION SLASH; fraction
 15334 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15335 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 inglleft
 15336 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15337 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 15338 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15339 % U+2212 MINUS SIGN; minus
 15340 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15341 % U+2030 PER MILLE SIGN; perthousand
 15342 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15343 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15344 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15345 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15346 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15347 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15348 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15349 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15350 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15351 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15352 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15353 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15354 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15355 % U+2122 TRADE MARK SIGN; trademark
 15356 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15357 % U+FB01 LATIN SMALL LIGATURE FI; fi

15358 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15359 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15360 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15361 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15362 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15363 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15364 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15365 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15366 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15367 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15368 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15369 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15370 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15371 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15372 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15373 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15374 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15375 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15376 % U+0153 LATIN SMALL LIGATURE OE; oe
 15377 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15378 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15379 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15380 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15381 \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.
 15382 % U+20AC EURO SIGN; *Euro, euro
 15383 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15384 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15385 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15386 % U+00A2 CENT SIGN; cent
 15387 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15388 % U+00A3 POUND SIGN; sterling
 15389 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15390 % U+00A4 CURRENCY SIGN; currency
 15391 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15392 % U+00A5 YEN SIGN; yen
 15393 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15394 % U+00A6 BROKEN BAR; brokenbar
 15395 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15396 % U+00A7 SECTION SIGN; section
 15397 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15398 % U+00A8 DIAERESIS; dieresis
 15399 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15400 % U+00A9 COPYRIGHT SIGN; copyright
 15401 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15402 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15403 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15404 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15405 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15406 % U+00AC NOT SIGN; logicalnot
 15407 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15408 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

15409 % U+00AE REGISTERED SIGN; registered
15410 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15411 % U+00AF MACRON; *macron, overscore
15412 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15413 % U+00B0 DEGREE SIGN; degree
15414 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15415 % U+00B1 PLUS-MINUS SIGN; plusminus
15416 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15417 % U+00B2 SUPERSCRIPT TWO; twosuperior
15418 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15419 % U+00B3 SUPERSCRIPT THREE; threesuperior
15420 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15421 % U+00B4 ACUTE ACCENT; acute
15422 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15423 % U+00B5 MICRO SIGN; mu, mul
15424 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15425 % U+00B6 PILCROW SIGN; paragraph
15426 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15427 % U+00B7 MIDDLE DOT; middot, *periodcentered
15428 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15429 % U+00B8 CEDILLA; cedilla
15430 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15431 % U+00B9 SUPERSCRIPT ONE; onesuperior
15432 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15433 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15434 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15435 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15436 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15437 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15438 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15439 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15440 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15441 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15442 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15443 % U+00BF INVERTED QUESTION MARK; questiondown
15444 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15445 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15446 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15447 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15448 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15449 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15450 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15451 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15452 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15453 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15454 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
15455 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15456 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15457 % U+00C6 LATIN CAPITAL LETTER AE; AE
15458 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15459 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15460 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7

15461 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15462 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15463 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15464 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15465 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15466 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15467 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15468 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15469 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15470 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15471 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15472 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15473 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15474 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15475 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15476 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15477 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15478 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15479 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15480 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15481 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15482 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15483 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15484 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15485 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15486 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15487 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15488 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15489 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15490 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15491 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15492 % U+00D7 MULTIPLICATION SIGN; multiply
15493 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15494 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15495 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15496 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15497 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15498 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15499 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15500 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15501 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15502 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15503 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15504 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15505 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15506 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15507 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15508 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15509 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15510 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15511 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15512 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15513 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15514 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1

15515 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15516 \DeclareTextCompositeCommand{\`}{PD1}{a}{\342}% U+00E2
15517 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15518 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15519 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15520 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15521 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15522 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15523 % U+00E6 LATIN SMALL LETTER AE; ae
15524 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15525 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15526 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15527 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15528 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15529 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15530 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15531 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15532 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15533 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15534 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15535 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15536 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15537 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15538 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15539 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15540 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15541 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15542 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15543 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15544 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15545 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15546 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15547 % U+00F0 LATIN SMALL LETTER ETH; eth
15548 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15549 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15550 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15551 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15552 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15553 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15554 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15555 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15556 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15557 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otild
15558 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15559 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15560 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15561 % U+00F7 DIVISION SIGN; divide
15562 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15563 % U+00F8 LATIN SMALL LETTER O WITH STROKE; slash
15564 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15565 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15566 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15567 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15568 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA

```

15569 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15570 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
15571 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15572 \DeclareTextCompositeCommand{\\"}{PD1}{u}{\374}% U+00FC
15573 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15574 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15575 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15576 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15577 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15578 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15579 \DeclareTextCompositeCommand{\\"}{PD1}{y}{\377}% U+00FF
15580 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15581 \DeclareTextCommand{\SS}{PD1}{SS}%
15582 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15583 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15584 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15585 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15586 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15587 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15588 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15589 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15590 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15591 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15592 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15593 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15594 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15595 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15596 \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).

```

15597 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15598 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15599 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15600 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15601 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15602 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15603 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15604 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15605 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15606 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15607 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15608 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15609 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15610 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15611 </pd1enc>

```

51.2 PU encoding

```

15612 (*puenc)

```


15613 \DeclareFontEncoding{PU}{-}{-}

51.2.1 NFSS2 accents

15614 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
15615 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15616 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecmb
15617 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15618 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15619 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15620 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15621 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15622 % U+0304 COMBINING MACRON; macroncmb
15623 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15624 % U+0306 COMBINING BREVE; brevecmb
15625 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15626 \ifx\CYRDZE\@undefined \else
15627 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15628 \fi
15629 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15630 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15631 % U+0308 COMBINING DIAERESIS; dieresiscmb
15632 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15633 % U+030A COMBINING RING ABOVE; ringcmb
15634 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15635 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15636 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15637 % U+030C COMBINING CARON; caroncmb
15638 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15639 \puenc
15640 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15641 \puextra\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15642 *puenc
15643 \ifx\CYRDZE\@undefined \else
15644 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15645 \fi
15646 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15647 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15648 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15649 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15650 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15651 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15652 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15653 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15654 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15655 % U+0327 COMBINING CEDILLA; cedillacmb
15656 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15657 % U+0328 COMBINING OGONEK; ogonekcmb
15658 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15659 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15660 % \textsubcircum (tipa)
15661 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15662 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15663 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E

```

15664 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15665 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15666 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15667 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15668 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
      blecmb
15669 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15670 % U+20DD COMBINING ENCLOSING CIRCLE
15671 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15672 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15673 \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.

```

15674 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15675 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15676 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15677 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15678 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15679 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15680 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15681 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15682 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15683 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15684 (/puenc)
15685 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15686 (*puenc)
15687 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15688 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15689 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15690 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311
15691 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}% U+0324
15692 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15693 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
      low}%
15694 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}% U+032E
15695 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15696 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15697 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15698 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15699 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15700 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15701 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\83\001\83\004}% U+0301 U
15702 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\83\000\83\004}% U+0300 U
15703 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15704 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15705 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15706 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15707 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15708 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15709 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15710 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15711 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%

```

```

15712 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15713 (/puenc)
15714 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15715 (*puenc)
15716 \DeclareTextCompositeCommand{\=} {PU}{\ }{\textasciimacron}%
15717 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15718 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15719 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{{\ \83\021}}% U+0311
15720 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{{\ \83\044}}% U+0324
15721 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15722 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15723 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{{\ \83\056}}% U+032E
15724 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\textttildelow}%
15725 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15726 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15727 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15728 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15729 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15730 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{{\ \83\001\83\004}}% U+0301 U+0304
15731 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{{\ \83\000\83\004}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15732 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15733 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15734 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15735 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15736 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15737 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15738 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15739 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15740 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15741 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15742 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15743 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15744 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15745 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15746 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

15747 % U+0009 (CHARACTER TABULATION)
15748 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15749 % U+000A (LINE FEED)
15750 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15751 % U+000D (CARRIAGE RETURN)
15752 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
15753 % U+0022 QUOTATION MARK; quotedbl
15754 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15755 % U+0023 NUMBER SIGN; numbersign
15756 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15757 % U+0024 DOLLAR SIGN; dollar
15758 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

```

15759 %* \textdollar -> \mathdollar
15760 %* \textdollar -> \EyesDollar (marvosym)
15761 % U+0025 PERCENT SIGN; percent
15762 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15763 % U+0026 AMPERSAND; ampersand
15764 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15765 %* \textampersand -> \binampersand (stmaryrd)
15766 %* \textampersand -> \with (cml)
15767 % U+0027 APOSTROPHE; quotesingle
15768 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15769 % U+0028 LEFT PARENTHESIS; parenleft
15770 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15771 % U+0029 RIGHT PARENTHESIS; parenright
15772 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15773 % U+002A ASTERISK; asterisk; (?)
15774 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15775 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15776 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15777 % U+002C COMMA; comma; \MVComma (marvosym)
15778 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15779 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15780 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15781 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15782 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15783 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15784 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15785 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15786 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15787 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15788 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15789 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15790 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15791 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15792 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15793 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15794 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15795 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15796 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15797 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15798 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15799 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15800 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15801 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15802 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15803 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15804 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon

15805 % U+003C LESS-THAN SIGN; less
15806 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

15807 % U+003E GREATER-THAN SIGN; greater
15808 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

$\backslash 80\backslash 077$: U+003F QUESTION MARK; question
15809 % U+0040 COMMERCIAL AT; at; $\backslash MVA$ t (marvosym)
15810 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVA}\}{PU}\{\backslash 80\backslash 100\}\%$ * U+0040
 $\backslash 80\backslash 101$: U+0041 LATIN CAPITAL LETTER A; A
...
 $\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
15811 % U+005C REVERSE SOLIDUS; backslash
15812 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}{PU}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
15813 % U+005E CIRCUMFLEX ACCENT; asciicircum
15814 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}{PU}\{\backslash 80\backslash 136\}\%$ U+005E
15815 % U+005F LOW LINE; underscore
15816 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}{PU}\{\backslash 80\backslash 137\}\%$ U+005F
15817 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
15818 % U+0060 GRAVE ACCENT; grave
15819 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}{PU}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
15820 % U+0069 LATIN SMALL LETTER I; i
15821 $\backslash \text{DeclareTextCompositeCommand}\{.\}{PU}\{i\}{i}\%$ $\backslash 80\backslash 151$ U+0069
15822 $\backslash \text{DeclareTextCompositeCommand}\{.\}{PU}\{i\}{i}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
15823 % U+007B LEFT CURLY BRACKET; braceleft
15824 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}{PU}\{\backslash 80\backslash 173\}\%$ U+007B
15825 % U+007C VERTICAL LINE; *bar, verticalbar
15826 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}{PU}\{|\}\%$ $\backslash 80\backslash 174$ U+007C
15827 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvtrline}$ (tipa)
15828 % U+007D RIGHT CURLY BRACKET; braceright
15829 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}{PU}\{\backslash 80\backslash 175\}\%$ U+007D
15830 % U+007E TILDE; asciitilde
15831 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}{PU}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15832 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15833 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}{PU}\{\backslash 80\backslash 241\}\%$ U+00A1
15834 % U+00A2 CENT SIGN; cent
15835 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}{PU}\{\backslash 80\backslash 242\}\%$ U+00A2
15836 % U+00A3 POUND SIGN; sterling
15837 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}{PU}\{\backslash 80\backslash 243\}\%$ U+00A3
15838 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)
15839 %* $\backslash \text{textsterling} \rightarrow \backslash \text{pounds}$ (LaTeX)
15840 % U+00A4 CURRENCY SIGN; currency
15841 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcurrency}\}{PU}\{\backslash 80\backslash 244\}\%$ U+00A4
15842 % U+00A5 YEN SIGN; yen

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15843 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15844 % U+00A6 BROKEN BAR; brokenbar
15845 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
15846 %* \textbrokenbar -> \brokenvert (wasysym)
15847 % U+00A7 SECTION SIGN; section
15848 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15849 %* \textsection -> \mathsection (LaTeX)
15850 %* \textsection -> \S (LaTeX)
15851 % U+00A8 DIAERESIS; dieresis
15852 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15853 % U+00A9 COPYRIGHT SIGN; copyright
15854 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15855 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15856 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15857 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
    motleft
15858 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15859 % U+00AC NOT SIGN; logicalnot
15860 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15861 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15862 % U+00AE REGISTERED SIGN; registered
15863 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15864 % U+00AF MACRON; *macron, overscore
15865 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15866 % U+00B0 DEGREE SIGN; degree
15867 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15868 % U+00B1 PLUS-MINUS SIGN; plusminus
15869 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15870 % U+00B2 SUPERSCRIPT TWO; twosuperior
15871 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15872 % U+00B3 SUPERSCRIPT THREE; threesuperior
15873 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15874 % U+00B4 ACUTE ACCENT; acute
15875 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15876 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15877 % U+00B5 MICRO SIGN; mu, mu1
15878 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15879 % U+00B6 PILCROW SIGN; paragraph
15880 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15881 %* \textparagraph -> \mathparagraph (LaTeX)
15882 % U+00B7 MIDDLE DOT; middot, *periodcentered
15883 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15884 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15885 %* \textperiodcentered -> \Squaredot (marvosym)
15886 % U+00B8 CEDILLA; cedilla
15887 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15888 % U+00B9 SUPERSCRIPT ONE; onesuperior
15889 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15890 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15891 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15892 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
    motright
15893 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB

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15894 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15895 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15896 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15897 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15898 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15899 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15900 % U+00BF INVERTED QUESTION MARK; questiondown
15901 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15902 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15903 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15904 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15905 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15906 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15907 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15908 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15909 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15910 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15911 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15912 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15913 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15914 % U+00C6 LATIN CAPITAL LETTER AE; AE
15915 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15916 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15917 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15918 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15919 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15920 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15921 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15922 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15923 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15924 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15925 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15926 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15927 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15928 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15929 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15930 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15931 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15932 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15933 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15934 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15935 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15936 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15937 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15938 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15939 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15940 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15941 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15942 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15943 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15944 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15945 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15946 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15947 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6

15948 % U+00D7 MULTIPLICATION SIGN; multiply
15949 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15950 %* \textmultiply -> \vartimes (stmaryrd)
15951 %* \textmultiply -> \MVMultiplication (marvosym)
15952 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15953 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15954 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15955 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15956 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15957 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15958 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15959 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15960 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15961 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15962 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15963 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15964 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15965 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15966 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15967 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15968 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15969 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15970 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15971 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15972 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15973 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15974 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15975 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15976 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15977 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15978 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15979 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15980 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15981 % U+00E6 LATIN SMALL LETTER AE; ae
15982 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15983 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15984 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15985 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15986 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15987 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15988 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15989 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15990 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15991 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15992 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15993 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15994 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15995 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
15996 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15997 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15998 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
15999 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16000 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16001 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE

16002 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 16003 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 16004 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 16005 % U+00F0 LATIN SMALL LETTER ETH; eth
 16006 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 16007 %* \dh -> \eth (wsuipa, phonetic)
 16008 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 16009 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
 16010 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 16011 \DeclareTextCompositeCommand{`}{PU}{o}{\80\362}% U+00F2
 16012 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16013 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
 16014 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16015 \DeclareTextCompositeCommand{^}{PU}{o}{\80\364}% U+00F4
 16016 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16017 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
 16018 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16019 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
 16020 % U+00F7 DIVISION SIGN; divide
 16021 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16022 % U+00F8 LATIN SMALL LETTER O WITH STROKE; slash
 16023 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16024 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16025 \DeclareTextCompositeCommand{`}{PU}{u}{\80\371}% U+00F9
 16026 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16027 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
 16028 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16029 \DeclareTextCompositeCommand{^}{PU}{u}{\80\373}% U+00FB
 16030 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16031 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
 16032 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16033 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
 16034 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16035 % \th, \thorn (wasysym), \textthorn (tipa)
 16036 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16037 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16038 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16039 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16040 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16041 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16042 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16043 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16044 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16045 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16046 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16047 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16048 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16049 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16050 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16051 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16052 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute

16053 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16054 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16055 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16056 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16057 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16058 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16059 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16060 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16061 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16062 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16063 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16064 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16065 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16066 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16067 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16068 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16069 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16070 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16071 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16072 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16073 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16074 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16075 % \textcrd (tipa)
16076 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16077 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16078 %* \textcrd -> \crossd (wsuipa)
16079 % An alternate glyph with the stroke through the bowl:
16080 %* \textcrd -> \textbard (tipa)
16081 %* \textcrd -> \bard (wsuipa)
16082 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16083 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16084 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16085 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16086 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16087 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16088 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16089 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16090 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16091 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16092 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16093 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16094 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16095 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16096 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16097 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16098 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16099 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16100 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16101 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16102 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16103 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16104 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16105 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D

16106 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16107 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16108 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16109 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16110 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16111 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16112 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16113 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16114 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16115 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16116 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16117 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16118 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16119 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16120 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16121 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16122 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16123 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16124 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16125 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16126 %* \texthbar -> \textcrh (tipa)
16127 %* \texthbar -> \crossh (wsuipa)
16128 %* \texthbar -> \planck (phonetic)
16129 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16130 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16131 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16132 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16133 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16134 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16135 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16136 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16137 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16138 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16139 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16140 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16141 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16142 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16143 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16144 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16145 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16146 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16147 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16148 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16149 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16150 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16151 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16152 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16153 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16154 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16155 % U+0133 LATIN SMALL LIGATURE IJ; ij
16156 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16157 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex

```

16158 \DeclareTextCompositeCommand{\~}{PU}{J}{\81\064}% U+0134
16159 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16160 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16161 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16162 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16163 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16164 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16165 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

```

16166 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16167 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16168 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16169 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16170 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16171 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16172 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16173 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16174 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16175 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16176 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16177 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16178 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16179 \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`.

```

16180 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16181 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16182 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16183 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16184 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16185 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16186 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16187 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16188 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16189 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16190 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16191 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16192 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
16193 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16194 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16195 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16196 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16197 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16198 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16199 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
16200 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-

```

trophe, quoterightn

16201 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149

16202 % U+014A LATIN CAPITAL LETTER ENG; Eng

16203 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A

16204 % U+014B LATIN SMALL LETTER ENG; eng

16205 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B

16206 %* \ng -> \eng (wsuipa)

16207 %* \ng -> \engma (phonetic)

16208 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron

16209 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

16210 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron

16211 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D

16212 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve

16213 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E

16214 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve

16215 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F

16216 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
cute, Ohungarumlaut

16217 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150

16218 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
cute, ohungarumlaut

16219 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151

16220 % U+0152 LATIN CAPITAL LIGATURE OE; OE

16221 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152

16222 % U+0153 LATIN SMALL LIGATURE OE; oe

16223 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153

16224 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute

16225 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154

16226 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

16227 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155

16228 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
cent

16229 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156

16230 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent

16231 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157

16232 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron

16233 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158

16234 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron

16235 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159

16236 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute

16237 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A

16238 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute

16239 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B

16240 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex

16241 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C

16242 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex

16243 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D

16244 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla

16245 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E

16246 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla

16247 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F

16248 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

16249 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160

16250 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron

16251 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16252 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 16253 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16254 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16255 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 16256 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16257 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16258 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16259 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 16260 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 16261 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 16262 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 16263 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 16264 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 16265 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16266 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16267 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16268 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 16269 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 16270 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16271 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16272 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16273 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16274 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16275 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16276 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16277 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16278 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16279 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16280 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 16281 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16282 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 16283 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16284 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16285 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16286 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16287 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16288 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16289 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16290 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16291 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16292 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16293 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16294 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16295 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16296 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16297 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16298 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16299 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16300 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16301 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A

16302 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16303 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16304 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16305 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16306 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
16307 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
16308 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16309 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
16310 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16311 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16312 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
16313 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16314 %* \textcrb -> \crossb (wsuipa)
16315 % An alternate glyph with the stroke through the bowl:
16316 %* \textcrb -> \textbarb (tipa)
16317 %* \textcrb -> \barb (wsuipa)
16318 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
16319 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
16320 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16321 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16322 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
16323 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
16324 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
16325 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
16326 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16327 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16328 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16329 %* \textflorin -> \Florin (marvosym)
16330 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16331 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16332 %* \texthvlig -> \hv (wsuipa)
16333 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16334 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
16335 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16336 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16337 %* \texthtk -> \hausak (phonetic)
16338 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16339 % \textbarl (tipa), \barl (wsuipa)
16340 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16341 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16342 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16343 % \textcrlambda (tipa)
16344 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16345 %* \textcrlambda -> \crossnilambda (wsuipa)
16346 %* \textcrlambda -> \barlambda (phonetic)
16347 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16348 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16349 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;

16350 % \textnrleg (tipx)
16351 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16352 %* \textPUnrleg -> \textnrleg (tipx)
16353 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthttp (tipa)
16354 \DeclareTextCommand{\texthttp}{PU}{\81\245}% U+01A5
16355 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16356 % \textlhookt (tipa)
16357 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16358 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16359 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16360 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16361 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16362 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16363 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16364 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16365 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16366 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16367 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16368 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16369 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16370 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16371 % \textpipe (tipa)
16372 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16373 %* \textpipe -> \textpipevar (tipx)
16374 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16375 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16376 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16377 %* \textdoublepipe -> \textdoublepipevar (tipx)
16378 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16379 % clickalveolar; \textdoublebarpipe (tipa)
16380 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16381 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16382 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16383 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16384 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16385 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16386 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16387 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16388 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16389 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16390 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16391 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16392 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16393 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16394 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16395 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16396 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16397 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16398 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16399 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16400 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16401 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke

16402 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16403 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16404 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16405 %* \textgslash -> \textcrg (tipa)
16406 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16407 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16408 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16409 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16410 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16411 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16412 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16413 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16414 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16415 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16416 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16417 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16418 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16419 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16420 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16421 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16422 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16423 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16424 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16425 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16426 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16427 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16428 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16429 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16430 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16431 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16432 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16433 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16434 % *Oslashacute, Ostrokeacute
16435 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16436 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16437 % *oslashacute, ostrokeacute
16438 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16439 </puenc>
16440 < *puextra>
16441 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16442 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16443 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16444 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16445 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16446 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16447 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16448 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16449 </puextra>
16450 < *puenc>
16451 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16452 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16453 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve

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16454 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16455 </puenc>
16456 <*puextra>
16457 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16458 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16459 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16460 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16461 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16462 </puextra>
16463 <*puenc>
16464 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16465 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16466 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16467 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16468 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16469 </puenc>
16470 <*puextra>
16471 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16472 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16473 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16474 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16475 </puextra>
16476 <*puenc>
16477 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16478 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16479 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16480 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16481 </puenc>
16482 <*puextra>
16483 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16484 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16485 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16486 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16487 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16488 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16489 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16490 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16491 </puextra>
16492 <*puenc>
16493 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16494 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16495 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
16496 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16497 % U+021E LATIN CAPITAL LETTER H WITH CARON
16498 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16499 % U+021F LATIN SMALL LETTER H WITH CARON
16500 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16501 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)

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16502 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16503 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16504 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16505 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16506 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16507 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16508 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16509 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16510 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16511 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16512 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16513 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16514 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16515 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16516 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16517 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16518 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16519 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16520 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16521 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16522 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16523 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16524 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16525 % U+0237 LATIN SMALL LETTER DOTLESS J
 16526 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16527 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16528 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16529 %* \textPUdblig -> \textdblig (tipx)
 16530 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16531 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16532 %* \textPUqplig -> \textqplig (tipx)
 16533 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16534 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16535 %* \textslashc -> \textcentoldstyle (textcomp)
 16536 % With bar instead of stroke:
 16537 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16538 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16539 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16540 %* \textturna -> \inva (wasysym)
 16541 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16542 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16543 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16544 %* \textscripta -> \vara (phonetic)
 16545 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16546 % \textturnscripta (tipa)
 16547 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16548 %* \textturnscripta -> \invscripta (wsuipa)
 16549 %* \textturnscripta -> \rotvara (phonetic)
 16550 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16551 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16552 %* \texthtb -> \hookb (wsuipa)
 16553 %* \texthtb -> \hausab (phonetic)

16554 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16555 % \textopeno (tipa), \openo (wasysym)
16556 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16557 %* \textopeno -> \varopeno (phonetic)
16558 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16559 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16560 %* \textctc -> \curlyc (wsuipa)
16561 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16562 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16563 %* \textrtaild -> \taild (wsuipa)
16564 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16565 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16566 %* \texthtd -> \hookd (wsuipa)
16567 %* \texthtd -> \hausad (phonetic)
16568 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16569 % \textreve (tipa), \reve (wsuipa)
16570 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16571 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16572 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16573 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16574 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16575 % \textrhookschwa (tipa)
16576 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16577 %* \textrhookschwa -> \er (wsuipa)
16578 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16579 % \niepsilon (wsuipa)
16580 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16581 %* \textniepsilon -> \epsi (phonetic)
16582 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16583 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16584 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16585 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16586 % \textrhookrevepsilon (tipa)
16587 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16588 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16589 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16590 % \textcloserevepsilon (tipa)
16591 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16592 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16593 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16594 % \textbardotlessj (tipa)
16595 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16596 %* \textbardotlessj -> \barj (phonetic)
16597 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16598 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16599 %* \texthtg -> \hookg (wsuipa)
16600 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16601 % \textscriptg (tipa), \scriptg (wsuipa)
16602 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16603 %* \textscriptg -> \varg (phonetic)

16604 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16605 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16606 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16607 % \ipagamma (wsuipa), \vod (phonetic)
16608 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16609 %* \textipagamma -> \vod (pnonetic)
16610 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16611 % \babygamma (wsuipa)
16612 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16613 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16614 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16615 %* \textturnh -> \invh (wsuipa)
16616 %* \textturnh -> \udesc (phonetic)
16617 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16618 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16619 %* \texthth -> \hookh (wsuipa)
16620 %* \texthth -> \voicedh (phonetic)
16621 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16622 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16623 %* \texththeng -> \hookheng (wsuipa)
16624 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16625 % \textbari (tipa), \bari (wsuipa)
16626 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16627 %* \textbari -> \ibar (phonetic)
16628 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \nniota (wsuipa)
16629 \DeclareTextCommand{\textnniota}{PU}{\82\151}%* U+0269
16630 %* \textnniota -> \vari (phonetic)
16631 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16632 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16633 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16634 % \textltilde (tipa)
16635 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16636 %* \textltilde -> \tildel (wsuipa)
16637 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16638 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16639 %* \textbeltl -> \latfric (wsuipa)
16640 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16641 % lhookretroflex; \textrtaill (tipa)
16642 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16643 %* \textrtaill -> \taill (wsuipa)
16644 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16645 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16646 %* \textlyoghlig -> \lz (wsuipa)
16647 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16648 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16649 %* \textturnm -> \invm (wsuipa)
16650 %* \textturnm -> \rotm (phonetic)
16651 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16652 % \textturnmrleg (tipa)
16653 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16654 %* \textturnmrleg -> \legm (wsuipa)
16655 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)

16656 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16657 %* \textltailm -> \labdentalnas (wsuipa)
16658 %* \textltailm -> \emgma (phonetic)
16659 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
16660 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16661 %* \textltailn -> \nj (wsuipa)
16662 %* \textltailn -> \nya (phonetic)
16663 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16664 % nhookretroflex; \textrtailn (tipa)
16665 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16666 %* \textrtailn -> \tailn (wsuipa)
16667 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16668 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16669 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16670 % LATIN CAPITAL LETTER BARRED O; obarred;
16671 % \textbaro (tipa), \baro (wsuipa)
16672 % But \baro from stmaryrd is different!
16673 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16674 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16675 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16676 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16677 % \textcloseomega (tipa)
16678 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16679 %* \textcloseomega -> \closedniomega (wsuipa)
16680 %* \textcloseomega -> \varomega (phonetic)
16681 % U+0278 LATIN SMALL LETTER PHI; philatin; \niphy (wsuipa)
16682 \DeclareTextCommand{\textniphy}{PU}{\82\170}%* U+0278
16683 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16684 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16685 %* \textturnr -> \invr (wsuipa)
16686 %* \textturnr -> \rotr (phonetic)
16687 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16688 % rlonglegturned; \textturnlongleg (tipa)
16689 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16690 %* \textturnlongleg -> \invleg (wsuipa)
16691 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhocturned;
16692 % \textturnrrtail (tipa)
16693 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16694 %* \textturnrrtail -> \tailinvr (wsuipa)
16695 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16696 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16697 %* \textlongleg -> \leg (wsuipa)
16698 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoct; \textrtailr (tipa)
16699 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16700 %* \textrtailr -> \tailr (wsuipa)
16701 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16702 % \textfishhookr (tipa)
16703 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16704 %* \textfishhookr -> \flapr (wsuipa)
16705 %* \textfishhookr -> \flap (phonetic)
16706 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;

16707 % \textlhtlongi (tipa)
16708 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16709 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16710 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16711 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16712 % \textinvscr (tipa), \invscr (wsuipa)
16713 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16714 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16715 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16716 %* \textrtails -> \tails (wsuipa)
16717 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16718 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16719 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16720 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16721 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16722 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
16723 % \textvibyi (tipa)
16724 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16725 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16726 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16727 %* \textctesh -> \curlyesh (wsuipa)
16728 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16729 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16730 %* \textturnt -> \clickt (wsuipa)
16731 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
16732 % \texttrtailt (tipa)
16733 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
16734 %* \texttrtailt -> \tailt (wsuipa)
16735 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16736 % \textbaru (tipa), \baru (wsuipa)
16737 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16738 %* \textbaru -> \ubar (phonetic)
16739 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16740 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16741 %* \textniupsilon -> \rotOmega (phonetic)
16742 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
16743 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16744 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16745 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16746 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16747 %* \textturnv -> \invv (wsuipa)
16748 %* \textturnv -> \pwedge (phonetic)
16749 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16750 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16751 %* \textturnw -> \invw (wsuipa)
16752 %* \textturnw -> \rotw (phonetic)
16753 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16754 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16755 %* \textturny -> \invy (wsuipa)
16756 %* \textturny -> \roty (phonetic)
16757 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)

16758 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
 16759 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 16760 % \textrtailz (tipa)
 16761 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
 16762 %* \textrtailz -> \tailz (wsuipa)
 16763 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 16764 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 16765 %* \textctz -> \curlyz (wsuipa)
 16766 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 16767 % \textyogh (tipa), \yogh (wsuipa)
 16768 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 16769 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 16770 % ezhcurl; \textctyogh (tipa)
 16771 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 16772 %* \textctyogh -> \curlyyogh (wsuipa)
 16773 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 16774 % \textglotstop (tipa), \glotstop (wsuipa)
 16775 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 16776 %* \textglotstop -> \ejective (wsuipa)
 16777 %* \textglotstop -> \glottal (phonetic)
 16778 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 16779 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 16780 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 16781 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 16782 %* \textrevglotstop -> \reveject (wsuipa)
 16783 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 16784 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 16785 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
 16786 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
 16787 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
 16788 %* \textstretchc -> \clickc (wsuipa)
 16789 %* \textstretchc -> \textstretchcvar (tipx)
 16790 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
 16791 % \textbullseye (tipa)
 16792 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
 16793 %* \textbullseye -> \clickb (wsuipa)
 16794 %* \textbullseye -> \textObullseye (tipx)
 16795 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
 16796 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
 16797 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
 16798 % \textcloseepsilon (tipa)
 16799 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
 16800 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
 16801 % \texthtscg (tipa)
 16802 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 16803 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
 16804 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 16805 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-tail; \textcdj (tipa)
 16806 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 16807 %* \textctj -> \textctjvar (tipx)
 16808 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)


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16809 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16810 %* \textturnk -> \textturnsck (tipx)
16811 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16812 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16813 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16814 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16815 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16816 % \textbarglotstop (tipa)
16817 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16818 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16819 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16820 % \textbarrevglotstop (tipa)
16821 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16822 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16823 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16824 %* \textdzlig -> \dz (wsupipa)
16825 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16826 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16827 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16828 % \textdctzlig (tipa)
16829 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16830 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16831 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16832 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
16833 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
16834 %* \texttshlig -> \tesh (wsuipa)
16835 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
16836 % \texttctclig (tipa)
16837 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
16838 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
16839 % \textlhtlongy (tipa)
16840 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
16841 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
16842 % \textvibyy (tipa)
16843 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

```

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

```

16844 % U+02BD MODIFIER LETTER REVERSED COMMA;
16845 % commareversedmod, afii64937; \textrevapostrophe (tipa)
16846 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16847 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16848 % \textraiseglotstop (tipa)
16849 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
16850 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16851 % \textlptr (tipa)
16852 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16853 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16854 % \textrptr (tipa)
16855 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16856 % U+02C7 CARON; caron
16857 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7

```

```

16858 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
16859 % \textprimstress (tipa)
16860 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
16861 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16862 % \textsecstress (tipa)
16863 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16864 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16865 % \textlengthmark (tipa)
16866 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16867 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
16868 % \texthalflength (tipa)
16869 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
16870 % U+02D8 BREVE; breve
16871 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16872 % U+02D9 DOT ABOVE; dotaccent
16873 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16874 % U+02DA RING ABOVE; ring
16875 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16876 % U+02DB OGONEK; ogonek
16877 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16878 % U+02DC SMALL TILDE; ilde, *tilde
16879 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16880 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16881 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16882 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16883 % U+02F3 MODIFIER LETTER LOWER RING
16884 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16885 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16886 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16887 % U+02F7 MODIFIER LETTER LOWER TILDE
16888 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16889 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16890 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16891 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16892 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

```

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

```

16893 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16894 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16895 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16896 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16897 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
16898 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16899 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16900 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16901 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
16902 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

```

51.2.9 Greek and Coptic: U+0370 to U+03FF

Greek is only loaded if \textBeta is defined.

```

16903 \ifx\textBeta\@undefined \else
16904 \input{puenc-greek.def}

```

16905 \fi
 16906 </puenc>
 16907 < *pugreek>
 16908 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16909 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16910 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374
 16911 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16912 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16913 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375
 16914 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 16915 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16916 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16917 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 16918 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 16919 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 16920 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 16921 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 16922 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 crontonos
 16923 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 16924 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 16925 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 16926 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 16927 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 16928 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 16929 % iotadiesisistonos
 16930 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 16931 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 16932 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 16933 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 16934 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 16935 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 16936 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 16937 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (La-
 TeX)
 16938 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 16939 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 16940 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 16941 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 16942 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 16943 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 16944 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 16945 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 16946 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 16947 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 16948 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 16949 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 16950 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 16951 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 16952 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 16953 % U+039C GREEK CAPITAL LETTER MU; Mu
 16954 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 16955 % U+039D GREEK CAPITAL LETTER NU; Nu
 16956 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D

16957 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16958 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16959 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16960 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16961 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16962 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16963 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16964 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16965 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16966 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16967 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16968 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16969 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16970 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16971 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16972 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16973 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16974 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16975 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16976 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16977 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16978 % \Omega (LaTeX)
16979 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16980 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16981 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16982 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16983 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
16984 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16985 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16986 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16987 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
16988 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16989 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
16990 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16991 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
16992 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16993 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16994 % AND TONOS; upsilonndieresis
16995 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
16996 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16997 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16998 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16999 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17000 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17001 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17002 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17003 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17004 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17005 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17006 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17007 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17008 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17009 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7

17010 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17011 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17012 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17013 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17014 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17015 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17016 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17017 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17018 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17019 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17020 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17021 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17022 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17023 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17024 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17025 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17026 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17027 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17028 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17029 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17030 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17031 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17032 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17033 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17034 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17035 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17036 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17037 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17038 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17039 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17040 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17041 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17042 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17043 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17044 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17045 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17046 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17047 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17048 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
17049 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17050 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17051 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17052 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17053 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17054 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17055 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17056 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17057 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
17058 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
17059 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
17060 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
17061 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17062 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA

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17063 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
17064 % U+03DB GREEK SMALL LETTER STIGMA
17065 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17066 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
17067 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17068 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17069 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
17070 % U+03DD GREEK SMALL LETTER DIGAMMA
17071 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17072 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD
17073 %* \textdigammagreek -> \digamma (AmS)
17074 % U+03DE GREEK LETTER KOPPA; Koppagreek
17075 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
17076 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17077 % U+03DF GREEK SMALL LETTER KOPPA
17078 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
17079 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17080 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17081 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17082 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
17083 % U+03E1 GREEK SMALL LETTER SAMPI
17084 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17085 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
17086 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17087 % \backepsilon (AmS)
17088 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
17089 \pugreek

```

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. Cyrillic only loaded if \CYRDZE is defined.

```

17090 \langle *puenc \rangle
17091 \ifx\CYRDZE\@undefined \else
17092 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17093 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17094 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
17095 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17096 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17097 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17098 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17099 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17100 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17101 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
17102 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17103 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17104 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17105 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17106 % Icyrillic, *afii10055
17107 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17108 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17109 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17110 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17111 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057

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17112 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17113 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17114 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17115 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17116 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17117 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17118 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17119 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17120 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17121 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17122 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17123 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17124 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17125 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17126 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17127 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17128 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17129 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17130 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17131 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17132 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17133 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17134 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17135 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17136 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17137 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17138 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17139 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17140 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17141 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17142 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17143 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17144 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17145 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17146 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17147 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17148 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17149 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17150 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17151 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17152 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17153 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17154 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17155 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17156 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17157 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17158 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17159 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17160 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17161 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17162 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17163 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17164 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17165 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036

17166 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17167 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17168 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17169 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17170 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17171 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17172 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17173 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17174 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17175 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17176 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17177 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17178 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17179 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17180 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17181 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17182 % Hardsigncyrillic, *afii10044
17183 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17184 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17185 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17186 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17187 % Softsigncyrillic, *afii10046
17188 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17189 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17190 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17191 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17192 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17193 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17194 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17195 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17196 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17197 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17198 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17199 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17200 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17201 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17202 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17203 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17204 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17205 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17206 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17207 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17208 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17209 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17210 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17211 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17212 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17213 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17214 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17215 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17216 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17217 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17218 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17219 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B

17220 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17221 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17222 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrlilic
17223 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17224 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17225 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17226 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrlilic
17227 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17228 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrlilic
17229 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17230 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrlilic
17231 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17232 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrlilic
17233 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17234 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrlilic
17235 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17236 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrlilic
17237 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17238 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrlilic
17239 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17240 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrlilic
17241 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17242 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrlilic
17243 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17244 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrlilic
17245 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17246 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrlilic
17247 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17248 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyril-
lic
17249 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17250 %* \cyrhrdsn -> \hardsign (tipa)
17251 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrlilic
17252 \DeclareTextCommand{\cyrry}{PU}{\84\113}% U+044B
17253 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrlilic
17254 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
17255 %* \cyrstsn -> \softsign (tipa)
17256 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrlilic
17257 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
17258 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrlilic
17259 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17260 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrlilic
17261 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17262 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17263 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17264 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrlilic
17265 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17266 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17267 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrlilic
17268 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17269 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrlilic
17270 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17271 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrlilic
17272 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454

17273 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 17274 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 17275 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
 17276 % *afii10103, icyrillic
 17277 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 17278 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 17279 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 17280 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
 17281 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 17282 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 17283 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 17284 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
 17285 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 17286 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 17287 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 17288 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 17289 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 17290 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
 17291 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 17292 \DeclareTextCompositeCommand{`}{PU}{\cyri}{\84\135}% U+045D
 17293 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 17294 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 17295 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 17296 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 17297 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 17298 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 17299 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 17300 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 17301 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 17302 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 17303 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 17304 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 17305 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 17306 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 17307 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 17308 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 17309 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 17310 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
 17311 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 17312 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
 17313 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 17314 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17315 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17316 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
 otifiedcyrillic
 17317 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17318 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17319 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17320 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17321 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 17322 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17323 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C

17324 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-cyrillic
 17325 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17326 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17327 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17328 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17329 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17330 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17331 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17332 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17333 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17334 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17335 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17336 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17337 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17338 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17339 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17340 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17341 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17342 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17343 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17344 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17345 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17346 % GRAVE ACCENT; izhitsadblgravecyrillic
 17347 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17348 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17349 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17350 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17351 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17352 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17353 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17354 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17355 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17356 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17357 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17358 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17359 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17360 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17361 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17362 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17363 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17364 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17365 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17366 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17367 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17368 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17369 \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
 17370 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17371 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17372 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17373 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17374 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17375 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17376 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17377 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17378 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17379 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17380 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17381 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17382 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17383 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17384 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 uptoncyrillic
 17385 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17386 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17387 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17388 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17389 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17390 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17391 % Ghemiddlehookcyrillic
 17392 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17393 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17394 % ghemiddlehookcyrillic
 17395 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17396 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17397 % Zhedescendercyrillic
 17398 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17399 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17400 % zhedescendercyrillic
 17401 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17402 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17403 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17404 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17405 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17406 \DeclareTextCommand{\cyrzdesc}{PU}{\84\231}% U+0499
 17407 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17408 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17409 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

17410 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescentercyrillic
 17411 \DeclareTextCommand{\cyrkdesc}{PU}{\84\233}% U+049B
 17412 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17413 % Kavertikalstrokecyrillic
 17414 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17415 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17416 % kavertikalstrokecyrillic
 17417 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17418 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17419 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17420 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17421 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 17422 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17423 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17424 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17425 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17426 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 17427 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17428 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 17429 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17430 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17431 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17432 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17433 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17434 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 17435 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17436 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 17437 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17438 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 17439 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17440 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17441 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17442 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 17443 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17444 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17445 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 17446 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17447 \DeclareTextCompositeCommand{\k}{PU}{\cys}{\84\253}% U+04AB
 17448 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 17449 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17450 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 17451 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
 17452 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17453 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

17454 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17455 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17456 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 17457 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17458 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 17459 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 17460 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
 dercyrillic
 17461 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 17462 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dercyrillic
 17463 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17464 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17465 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17466 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17467 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17468 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17469 % Chedescendercyrillic
 17470 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17471 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 17472 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 17473 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17474 % Cheverticalstrokecyrillic
 17475 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17476 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17477 % cheverticalstrokecyrillic
 17478 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17479 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17480 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17481 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17482 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17483 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 17484 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17485 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 17486 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17487 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 17488 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17489 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17490 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17491 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17492 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17493 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17494 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17495 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17496 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17497 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17498 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

17499 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17500 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17501 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17502 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17503 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17504 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17505 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17506 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 17507 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17508 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17509 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17510 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17511 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17512 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17513 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17514 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17515 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17516 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17517 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17518 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17519 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17520 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17521 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17522 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17523 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 17524 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17525 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17526 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17527 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17528 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17529 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17530 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17531 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17532 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17533 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17534 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17535 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17536 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17537 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17538 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17539 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17540 % Schwadiesiscyrillic
 17541 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17542 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17543 % schwadiesiscyrillic
 17544 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17545 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedie-
 riscyrillic
 17546 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17547 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-

cyrillic
 17548 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 17549 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 17550 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 17551 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresis-
 cyrillic
 17552 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 17553 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 17554 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17555 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasian-
 cyrillic
 17556 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17557 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Iacroncyrillic
 17558 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2
 17559 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; iacroncyrillic
 17560 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
 17561 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresis-
 cyrillic
 17562 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 17563 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresis-
 cyrillic
 17564 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 17565 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresis-
 cyrillic
 17566 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 17567 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresis-
 cyrillic
 17568 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 17569 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 17570 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 17571 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 17572 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17573 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17574 % Obarreddieresis-
 cyrillic
 17575 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17576 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17577 % obarreddieresis-
 cyrillic
 17578 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17579 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17580 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17581 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17582 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17583 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacron-
 cyrillic
 17584 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
 17585 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacron-
 cyrillic
 17586 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
 17587 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresis-
 cyrillic
 17588 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17589 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresis-
 cyrillic
 17590 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17591 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 17592 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17593 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-

garumlautcyrillic
17594 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
17595 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17596 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
17597 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
cyrillic
17598 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
17599 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17600 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17601 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17602 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17603 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17604 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
17605 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17606 \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
17607 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17608 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17609 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17610 \DeclareTextCommand{\cyrhk}{PU}{\84\375}% U+04FD
17611 \fi
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. `hebrew` is only loaded if `\hebdalet` is defined

17612 \ifx\hebdalet\@undefined\else
17613 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17614 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17615 % U+05D0 HEBREW LETTER ALEF
17616 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17617 % U+05D1 HEBREW LETTER BET
17618 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17619 % U+05D2 HEBREW LETTER GIMEL
17620 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17621 % U+05D3 HEBREW LETTER DALET
17622 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17623 % U+05D4 HEBREW LETTER HE
17624 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17625 % U+05D5 HEBREW LETTER VAV
17626 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17627 % U+05D6 HEBREW LETTER ZAYIN
17628 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17629 % U+05D7 HEBREW LETTER HET

17630 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
 17631 % U+05D8 HEBREW LETTER TET
 17632 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
 17633 % U+05D9 HEBREW LETTER YOD
 17634 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17635 % U+05DA HEBREW LETTER FINAL KAF
 17636 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17637 % U+05DB HEBREW LETTER KAF
 17638 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
 17639 % U+05DC HEBREW LETTER LAMED
 17640 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17641 % U+05DD HEBREW LETTER FINAL MEM
 17642 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17643 % U+05DE HEBREW LETTER MEM
 17644 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE
 17645 % U+05DF HEBREW LETTER FINAL NUN
 17646 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17647 % U+05E0 HEBREW LETTER NUN
 17648 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17649 % U+05E1 HEBREW LETTER SAMEKH
 17650 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17651 % U+05E2 HEBREW LETTER AYIN
 17652 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17653 % U+05E3 HEBREW LETTER FINAL PE
 17654 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17655 % U+05E4 HEBREW LETTER PE
 17656 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17657 % U+05E5 HEBREW LETTER FINAL TSADI
 17658 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17659 % U+05E6 HEBREW LETTER TSADI
 17660 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17661 % U+05E7 HEBREW LETTER QOF
 17662 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17663 % U+05E8 HEBREW LETTER RESH
 17664 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17665 % U+05E9 HEBREW LETTER SHIN
 17666 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17667 %* \hebshin -> \hebsin (he8)
 17668 % U+05EA HEBREW LETTER TAV
 17669 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17670 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17671 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17672 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17673 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17674 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17675 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17676 \fi

51.2.12 Thai: U+0E00 to U+0E7F

17677 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17678 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17679 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17680 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 17681 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17682 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17683 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 17684 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 17685 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 17686 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 17687 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17688 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17689 %* \textPUscK -> \textscK (tipx)
 17690 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 17691 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 17692 %* \textPUscM -> \textscM (tipx)
 17693 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17694 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17695 %* \textPUscP -> \textscP (tipx)
 17696 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17697 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17698 %* \textPUrevscr -> \textrevscr (tipx)
 17699 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 17700 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
 17701 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17702 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17703 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17704 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17705 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17706 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17707 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17708 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17709 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17710 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17711 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17712 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17713 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17714 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17715 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17716 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17717 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17718 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17719 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17720 % \barsci (wsuipa)
 17721 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17722 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17723 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17724 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17725 % \barscu (wsuipa)
 17726 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17727 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17728 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 17729 %* \textPURhooka -> \textrhooka (tipx)

17730 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtrtaild (tipa)
 17731 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17732 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \texttrhooke (tipx)
 17733 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
 17734 %* \textPUrhooke -> \texttrhooke (tipx)
 17735 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17736 % \textrhookepsilon (tipx)
 17737 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
 17738 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
 17739 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17740 % \textrhookopeno (tipx)
 17741 \DeclareTextCommand{\textPUrhookopeno}{PU}{\9035\227}% U+1D97
 17742 %* \textPUrhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17743 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17744 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17745 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17746 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17747 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17748 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 17749 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17750 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 17751 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17752 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17753 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17754 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17755 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17756 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17757 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 17758 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 17759 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 17760 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 17761 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 17762 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 17763 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 17764 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 17765 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 17766 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 17767 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 17768 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 17769 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 17770 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 17771 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 17772 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 17773 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 17774 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 17775 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcircumflexbelow
 17776 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 17777 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcircumflexbelow

17778 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17779 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17780 % Emacrongrave
17781 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17782 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17783 % emacrongrave
17784 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17785 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17786 % Emacronacute
17787 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17788 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17789 % emacronacute
17790 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17791 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
17792 cumflexbelow
17792 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17793 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
17794 cumflexbelow
17794 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17795 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17796 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17797 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17798 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17799 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17800 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
17801 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17802 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
17803 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17804 \DeclareTextCompositeCommand{=}{PU}{G}{\9036\040}% U+1E20
17805 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17806 \DeclareTextCompositeCommand{=}{PU}{g}{\9036\041}% U+1E21
17807 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17808 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
17809 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17810 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
17811 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17812 \DeclareTextCompositeCommand{d}{PU}{H}{\9036\044}% U+1E24
17813 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17814 \DeclareTextCompositeCommand{d}{PU}{h}{\9036\045}% U+1E25
17815 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17816 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
17817 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17818 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
17819 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17820 \DeclareTextCompositeCommand{c}{PU}{H}{\9036\050}% U+1E28
17821 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17822 \DeclareTextCompositeCommand{c}{PU}{h}{\9036\051}% U+1E29
17823 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17824 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17825 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17826 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17827 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17828 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17829 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow

17830 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17831 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17832 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17833 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17834 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17835 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17836 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17837 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17838 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17839 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17840 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17841 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17842 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17843 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17844 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17845 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17846 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17847 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17848 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17849 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17850 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17851 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17852 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17853 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17854 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17855 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17856 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17857 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17858 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17859 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17860 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17861 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17862 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17863 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17864 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17865 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17866 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17867 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17868 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17869 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17870 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17871 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17872 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17873 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17874 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17875 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17876 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17877 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17878 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17879 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17880 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A

17881 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 17882 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 17883 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 17884 % Omacrongrave
 17885 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 17886 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 17887 % omacrongrave
 17888 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 17889 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 17890 % Omacronacute
 17891 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 17892 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 17893 % omacronacute
 17894 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 17895 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 17896 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 17897 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 17898 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 17899 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 17900 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 17901 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 17902 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 17903 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 17904 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 17905 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 17906 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 17907 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 17908 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 17909 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 17910 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 17911 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 17912 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 17913 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 17914 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 17915 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 17916 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 17917 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 17918 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 17919 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 17920 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 17921 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 17922 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 17923 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 17924 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 17925 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 17926 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 17927 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 17928 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 17929 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 17930 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 17931 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 17932 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 17933 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow

17934 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17935 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcircumflexbelow
17936 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17937 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
17938 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17939 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17940 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17941 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17942 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17943 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17944 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17945 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17946 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17947 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucircumflexbelow
17948 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17949 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucircumflexbelow
17950 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17951 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17952 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17953 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17954 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17955 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17956 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17957 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17958 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17959 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17960 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17961 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17962 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17963 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17964 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17965 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17966 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17967 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17968 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17969 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17970 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17971 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17972 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17973 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17974 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17975 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17976 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17977 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17978 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17979 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17980 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17981 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent

17982 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17983 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17984 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17985 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17986 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\215}% U+1E8D
17987 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17988 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17989 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17990 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17991 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17992 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17993 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17994 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17995 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17996 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17997 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17998 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17999 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18000 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18001 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18002 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18003 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18004 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18005 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18006 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18007 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18008 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18009 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18010 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18011 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
18012 \DeclareTextCompositeCommand{\.}{PU}{\textlongS}{\9036\233}% U+1E9B
18013 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18014 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18015 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
18016 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
18017 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
18018 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
18019 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
18020 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
18021 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
18022 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
18023 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18024 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18025 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18026 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18027 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18028 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18029 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18030 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
18031 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
18032 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
18033 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
18034 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4

18035 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18036 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18037 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18038 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18039 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18040 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18041 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18042 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18043 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18044 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18045 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18046 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18047 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18048 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18049 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18050 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18051 % U+2013 EN DASH; endash
 18052 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18053 % U+2014 EM DASH; emdash
 18054 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18055 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18056 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18057 %* \textbardbl -> \textdoublevertline (tipa)
 18058 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18059 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18060 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18061 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18062 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18063 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18064 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18065 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18066 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18067 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18068 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18069 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18070 % U+2020 DAGGER; dagger
 18071 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18072 %* \textdagger -> \dag (LaTeX)
 18073 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18074 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18075 %* \textdaggerdbl -> \ddagger (LaTeX)
 18076 %* \textdaggerdbl -> \ddag (LaTeX)
 18077 % U+2022 BULLET; bullet
 18078 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18079 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18080 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18081 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18082 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18083 %* \textellipsis -> \mathellipsis
 18084 % U+2030 PER MILLE SIGN; perthousand
 18085 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18086 % U+2031 PER TEN THOUSAND SIGN

18087 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18088 % U+2032 PRIME; minute; \prime (MnSymbol)
 18089 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18090 % U+2033 DOUBLE PRIME; \second (mathabx)
 18091 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18092 % U+2034 TRIPLE PRIME; \third (mathabx)
 18093 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18094 % U+2035 REVERSED PRIME; \backprime (AmS)
 18095 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18096 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 18097 \DeclareTextCommand{\guilingleft}{PU}{\9040\071}% U+2039
 18098 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 18099 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18100 % U+203B REFERENCE MARK; referencemark
 18101 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18102 % U+203D INTERROBANG
 18103 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18104 % U+2044 FRACTION SLASH; fraction
 18105 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18106 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18107 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18108 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18109 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18110 % U+2052 COMMERCIAL MINUS SIGN
 18111 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18112 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18113 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18114 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18115 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18116 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18117 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18118 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18119 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18120 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18121 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18122 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18123 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18124 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18125 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18126 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18127 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18128 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18129 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18130 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18131 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18132 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18133 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18134 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18135 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18136 % U+207B SUPERSCRIPT MINUS

18137 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18138 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18139 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18140 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18141 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18142 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18143 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18144 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18145 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18146 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18147 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18148 % U+2081 SUBSCRIPT ONE; oneinferior
 18149 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18150 % U+2082 SUBSCRIPT TWO; twoinferior
 18151 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18152 % U+2083 SUBSCRIPT THREE; threeinferior
 18153 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18154 % U+2084 SUBSCRIPT FOUR; fourinferior
 18155 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18156 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18157 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18158 % U+2086 SUBSCRIPT SIX; sixinferior
 18159 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18160 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18161 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18162 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18163 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18164 % U+2089 SUBSCRIPT NINE; nineinferior
 18165 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18166 % U+208A SUBSCRIPT PLUS SIGN
 18167 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18168 % U+208B SUBSCRIPT MINUS
 18169 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18170 % U+208C SUBSCRIPT EQUALS SIGN
 18171 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18172 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18173 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18174 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18175 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18176 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18177 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18178 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18179 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18180 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18181 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18182 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18183 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18184 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18185 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18186 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18187 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18188 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18189 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18190 % U+2097 LATIN SUBSCRIPT SMALL LETTER L

18191 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18192 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18193 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18194 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18195 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18196 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18197 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18198 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18199 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18200 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18201 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18202 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18203 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18204 % U+20A4 LIRA SIGN; afi08941, *lira
 18205 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18206 % U+20A6 NAIRA SIGN
 18207 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18208 % U+20A7 PESETA SIGN; peseta
 18209 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18210 % U+20A9 WON SIGN; won
 18211 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18212 % U+20AB DONG SIGN; dong
 18213 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18214 % U+20AC EURO SIGN; *Euro, euro
 18215 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18216 %* \texteuro -> \EurDig (marvosym)
 18217 %* \texteuro -> \EURdig (marvosym)
 18218 %* \texteuro -> \EurHv (marvosym)
 18219 %* \texteuro -> \EURhv (marvosym)
 18220 %* \texteuro -> \EurCr (marvosym)
 18221 %* \texteuro -> \EURcr (marvosym)
 18222 %* \texteuro -> \EurTm (marvosym)
 18223 %* \texteuro -> \EURtm (marvosym)
 18224 %* \texteuro -> \Eur (marvosym)
 18225 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18226 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18227 %* \textDeleatur -> \Denarius (marvosym)
 18228 % U+20B1 PESO SIGN
 18229 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18230 % U+20B2 GUARANI SIGN
 18231 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18232 % U+2103 DEGREE CELSIUS; centigrade
 18233 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18234 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18235 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18236 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18237 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18238 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
 18239 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113

18240 % U+2116 NUMERO SIGN; *afii61352, numero
 18241 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18242 % U+2117 SOUND RECORDING COPYRIGHT
 18243 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18244 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18245 % weierstrass; \wp (LaTeX)
 18246 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18247 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18248 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18249 % U+211E PRESCRIPTION TAKE; prescription
 18250 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18251 % U+2120 SERVICE MARK
 18252 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18253 % U+2122 TRADE MARK SIGN; trademark
 18254 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18255 % U+2126 OHM SIGN; Ohm, Omega
 18256 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18257 % U+2127 INVERTED OHM SIGN
 18258 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18259 %* \textmho -> \agemO (wasysym)
 18260 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18261 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18262 % U+212B ANGSTROM SIGN; angstrom
 18263 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18264 % U+212E ESTIMATED SYMBOL; estimated
 18265 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18266 %* \textestimated -> \EstimatedSign (marvosym)
 18267 %* \textestimated -> \Ecommerce (marvosym)
 18268 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18269 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18270 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18271 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18272 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18273 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18274 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18275 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18276 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18277 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18278 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18279 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18280 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18281 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18282 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18283 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18284 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18285 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18286 % U+2150 VULGAR FRACTION ONE SEVENTH
 18287 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18288 % U+2151 VULGAR FRACTION ONE NINTH
 18289 \DeclareTextCommand{\textneninth}{PU}{\9041\121}% U+2151
 18290 % U+2152 VULGAR FRACTION ONE TENTH
 18291 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152

18292 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18293 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18294 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18295 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18296 % U+2155 VULGAR FRACTION ONE FIFTH
 18297 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18298 % U+2156 VULGAR FRACTION TWO FIFTHS
 18299 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18300 % U+2157 VULGAR FRACTION THREE FIFTHS
 18301 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18302 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18303 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18304 % U+2159 VULGAR FRACTION ONE SIXTH
 18305 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18306 % U+215A VULGAR FRACTION FIVE SIXTHS
 18307 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18308 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18309 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18310 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18311 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18312 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18313 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18314 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18315 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18316 % U+2184 LATIN SMALL LETTER REVERSED C
 18317 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18318 % U+2189 VULGAR FRACTION ZERO THIRDS
 18319 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18320 % U+2190 LEFTWARDS ARROW; arrowleft
 18321 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18322 % U+2191 UPWARDS ARROW; arrowup
 18323 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18324 % U+2192 RIGHTWARDS ARROW; arrowright
 18325 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18326 %* \textrightarrow -> \MVRightArrow (marvosym)
 18327 %* \textrightarrow -> \MVRightarrow (marvosym)
 18328 % U+2193 DOWNWARDS ARROW; arrowdown
 18329 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18330 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18331 %* \textdownarrow -> \Force (marvosym)
 18332 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18333 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18334 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18335 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18336 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18337 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18338 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18339 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18340 %* \textnearrow -> \textglobrise (tipa)
 18341 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18342 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18343 %* \textsearrow -> \textglobfall (tipa)

18344 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18345 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18346 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18347 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18348 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
18349 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18350 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18351 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18352 % \twoheadleftarrow (txfonts/pxfonts)
18353 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18354 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18355 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18356 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18357 % \twoheadrightarrow (AmS)
18358 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18359 % \twoheadrightarrow (txfonts/pxfonts)
18360 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18361 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18362 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18363 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18364 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18365 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18366 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18367 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18368 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18369 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18370 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18371 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18372 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18373 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18374 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18375 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18376 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18377 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18378 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18379 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18380 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18381 %* \textlightning -> \Lightning (marvosym)
18382 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18383 % \dls (mathabx)
18384 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18385 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18386 % \curvearrowleft (AmS)
18387 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18388 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18389 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18390 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
18391 % \leftharpoonup (LaTeX)
18392 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18393 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18394 % \leftharpoondown (LaTeX)
18395 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD


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18396 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18397 % \upharpoonright (AmS)
18398 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18399 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18400 % \upharpoonleft (AmS)
18401 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18402 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
18403 % \rightharpoonup (LaTeX)
18404 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18405 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18406 % \rightharpoontdown (LaTeX)
18407 \DeclareTextCommand{\textrightharpoontdown}{PU}{\9041\301}%* U+21C1
18408 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18409 % \downharpoonright (AmS)
18410 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18411 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18412 % \downharpoonleft (AmS)
18413 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18414 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18415 % \arrowrightoverleft; \rightleftarrows (MnSymbol)
18416 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18417 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
18418 % \updownarrows (MnSymbol)
18419 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18420 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
    overright;
18421 % \leftrightarrows (AmS)
18422 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18423 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18424 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18425 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18426 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18427 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18428 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18429 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18430 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18431 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18432 % \leftrightharpoons (AmS);
18433 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18434 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18435 % \rightleftharpoons (LaTeX, AmS)
18436 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18437 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; \arrowleftd-
    blstroke;
18438 % \nLeftarrow (AmS)
18439 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18440 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLefttrightar-
    row (AmS)
18441 \DeclareTextCommand{\textnLefttrightarrow}{PU}{\9041\316}%* U+21CE
18442 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; \arrowrightd-
    blstroke;
18443 % \nRightarrow (AmS)

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18444 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\317}%* U+21CF
18445 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18446 % \Leftarrow (LaTeX)
18447 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18448 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18449 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18450 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18451 % \rightarrow (LaTeX)
18452 \DeclareTextCommand{\textrightarrow}{PU}{\9041\322}%* U+21D2
18453 %* \textrightarrow -> \Conclusion (marvosym)
18454 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
TeX)
18455 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18456 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18457 % \Leftrightarrow (LaTeX)
18458 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18459 %* \textLeftrightarrow -> \Equivalence (marvosym)
18460 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18461 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18462 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18463 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18464 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18465 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18466 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18467 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18468 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18469 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18470 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18471 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18472 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18473 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18474 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18475 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18476 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18477 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18478 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18479 % \dashleftarrow (AmS)
18480 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18481 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18482 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18483 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18484 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightar-
row (AmS)
18485 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18486 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18487 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18488 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18489 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18490 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18491 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18492 % \downuparrows (MnSymbol)
18493 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5

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18494 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18495 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18496 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18497 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18498 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
      (stmaryrd)
18499 \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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18500 % U+2200 FOR ALL; forall; \forall (LaTeX)
18501 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18502 % U+2201 COMPLEMENT; \complement (AmS)
18503 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18504 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18505 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18506 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18507 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18508 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18509 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18510 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18511 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18512 %* \textemptyset -> \varnothing (AmS)
18513 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18514 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18515 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18516 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18517 % U+2208 ELEMENT OF; element; \in (LaTeX)
18518 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18519 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18520 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18521 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18522 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18523 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18524 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18525 %* \textni -> \owns (mathabx)
18526 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18527 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18528 %* \textnotowner -> \notni (txfonts/pxfonts)
18529 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18530 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18531 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18532 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18533 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18534 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18535 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18536 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18537 % U+2212 MINUS SIGN; minus
18538 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18539 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18540 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18541 % U+2214 DOT PLUS; \dotplus (AmS)
18542 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18543 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18544 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215

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18545 % \DividesNot (marvosym)
18546 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18547 % U+2216 SET MINUS; \setminus (LaTeX)
18548 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18549 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18550 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18551 % U+2218 RING OPERATOR; \circ (LaTeX)
18552 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18553 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18554 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18555 % U+221A SQUARE ROOT; radical
18556 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18557 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18558 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18559 %* \textpropto -> \varprop (wasysym)
18560 % U+221E INFINITY; infinity; \infty (LaTeX)
18561 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18562 % U+2220 ANGLE; angle; \angle (LaTeX)
18563 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18564 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18565 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18566 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18567 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18568 %* \textsphericalangle -> \varangle (wasysym)
18569 %* \textsphericalangle -> \Anglesign (marvosym)
18570 %* \textsphericalangle -> \AngleSign (marvosym)
18571 % U+2223 DIVIDES; divides; \mid (LaTeX)
18572 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18573 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18574 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18575 %* \textnmid -> \notdivides (mathabx)
18576 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18577 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18578 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18579 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18580 %* \textnparallel -> nUpdownline (MnSymbol)
18581 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18582 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18583 % \owedge (stmaryrd)
18584 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18585 %* \textowedge -> \varowedge (stmaryrd)
18586 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18587 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18588 % \ovee (stmaryrd)
18589 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18590 %* \textovee -> \varovee (stmaryrd)
18591 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18592 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18593 % U+222A UNION; union; \cup (LaTeX)
18594 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18595 % U+222B INTEGRAL; integral; \int (LaTeX)
18596 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18597 %* \textint -> \varint (wasysym)
18598 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)

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18599 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18600 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18601 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18602 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18603 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18604 %* \textoint -> \varoint (wasysym)
18605 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18606 \DeclareTextCommand{\texttooint}{PU}{\9042\057}%* U+222F
18607 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18608 % \ointclockwise (txfonts/pxfonts)
18609 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18610 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18611 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18612 % U+2234 THEREFORE; therefore; \therefore (AmS)
18613 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18614 %* \texttherefore -> uptherefore (MnSymbol)
18615 % U+2235 BECAUSE; because; \because (AmS)
18616 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18617 %* \textbecause -> \downtherefore (MnSymbol)
18618 % U+2236 RATIO; \vdotdot (MnSymbol)
18619 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18620 % U+2237 PROPORTION; \squaredots (MnSymbol)
18621 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18622 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18623 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18624 %* \textdotminus -> \textdotdiv (mathabx)
18625 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18626 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18627 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18628 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18629 %* \textsim -> \AC (wasysym)
18630 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18631 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18632 % \nbacksim (txfonts/pxfonts)
18633 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18634 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18635 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18636 %* \textwr -> \wreath (MnSymbol)
18637 % U+2241 NOT TILDE; \nsim (AmS)
18638 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18639 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18640 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18641 % \neqsim (MnSymbol)
18642 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18643 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
18644 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18645 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18646 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18647 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18648 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18649 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18650 % \ncong (AmS)

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18651 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18652 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18653 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18654 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18655 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18656 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18657 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18658 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18659 % \napproxeq (txfonts/pxfonts)
18660 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18661 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18662 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18663 %* \texttriplesim -> \VHF (wasysym)
18664 % \ntriplesim (MnSymbol)
18665 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18666 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18667 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18668 % \nbackcong (MnSymbol)
18669 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18670 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18671 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18672 % \nasymp (txfonts/pxfonts)
18673 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18674 %* \textnasymp -> \notasymp (mathabx)
18675 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18676 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18677 % \nBumpeq (txfonts/pxfonts)
18678 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18679 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18680 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18681 % \nbumpeq (txfonts/pxfonts)
18682 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18683 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18684 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18685 % \ndoteq (MnSymbol)
18686 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18687 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18688 % \doteqdot (AmS)
18689 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18690 %* \textdoteqdot -> \Doteq (MnSymbol)
18691 % \nDoteq (MnSymbol)
18692 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18693 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18694 % \fallingdotseq (AmS)
18695 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18696 % \nfallingdotseq (MnSymbol)
18697 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18698 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18699 % \risingdotseq (AmS)
18700 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18701 % \nrisingdotseq (MnSymbol)
18702 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338

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18703 % U+2254 COLON EQUALS; \colonequals (colonequals)
18704 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18705 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18706 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18707 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18708 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18709 % \neqcirc (MnSymbol)
18710 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18711 % U+2257 RING EQUAL TO; \circeq (AmS)
18712 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18713 % \ncirceq (MnSymbol)
18714 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18715 % U+2259 ESTIMATES; \hateq (MnSymbol)
18716 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18717 %* \texthateq -> \corresponds (mathabx)
18718 %* \texthateq -> \Corresponds (marvosym)
18719 % \nhateq (MnSymbol)
18720 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18721 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18722 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18723 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18724 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18725 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18726 %* \textneq -> \nequal (MnSymbol)
18727 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18728 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18729 %* \textequiv -> \Congruent (marvosym)
18730 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18731 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18732 %* \textnequiv -> \NotCongruent (marvosym)
18733 %* \textnequiv -> \notequiv (mathabx)
18734 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18735 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18736 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18737 %* \textleq -> \LessOrEqual (marvosym)
18738 % U+2265 GREATER-THAN OR EQUAL TO; greaterorequal;
18739 % \ge (LaTeX), \geq (LaTeX)
18740 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18741 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18742 %* \textgeq -> \LargerOrEqual (marvosym)
18743 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18744 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18745 % \nleqq (txfonts/pxfonts)
18746 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18747 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
18748 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18749 % \ngeqq (txfonts/pxfonts)
18750 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18751 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18752 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18753 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18754 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18755 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18756 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A

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18757 % \nll (txfonts/pxfonts)
18758 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18759 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18760 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18761 % \ngg (txfonts/pxfonts)
18762 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18763 % U+226C BETWEEN; \between (AmS)
18764 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18765 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18766 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18767 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18768 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18769 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18770 % \nleq (AmS)
18771 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18772 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
18773 % \ngeq (AmS)
18774 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18775 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18776 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18777 %* \textlessim -> \apprle (wasysym)
18778 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim
18779 % (AmS)
18780 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18781 %* \textgtrsim -> \apprge (wasysym)
18782 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
18783 % fonts/pxfonts)
18784 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18785 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
18786 % fonts/pxfonts)
18787 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18788 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18789 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18790 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18791 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18792 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
18793 % fonts/pxfonts)
18794 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18795 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
18796 % fonts/pxfonts)
18797 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18798 % U+227A PRECEDES; precedes; \prec (LaTeX)
18799 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18800 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18801 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18802 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18803 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18804 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18805 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18806 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18807 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18808 % \nprecsim (txfonts/pxfonts)
18809 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18810 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)

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18805 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18806 % \nsuccsim (txfonts/pxfonts)
18807 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18808 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18809 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18810 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18811 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18812 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18813 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18814 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18815 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18816 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18817 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18818 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18819 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18820 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18821 \DeclareTextCommand{\textsubsubseteq}{PU}{\9042\206}%* U+2286
18822 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18823 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18824 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18825 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18826 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18827 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18828 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
18829 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18830 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
18831 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18832 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)
18833 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18834 % U+228E MULTISET UNION; \cupplus (MnSymbol)
18835 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18836 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18837 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18838 % \nsqsubset (txfonts/pxfonts)
18839 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18840 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18841 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18842 % \nsqsupset (txfonts/pxfonts)
18843 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18844 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18845 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18846 % \nsqsubseteq (txfonts/pxfonts)
18847 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18848 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18849 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18850 % \nsqsupseteq (txfonts/pxfonts)
18851 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18852 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18853 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18854 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18855 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18856 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)

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18857 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18858 %* \textoplus -> \varoplus (stmaryrd)
18859 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18860 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18861 %* \textominus -> \varominus (stmaryrd)
18862 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18863 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18864 %* \textotimes -> \varotimes (stmaryrd)
18865 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18866 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18867 %* \textoslash -> \varoslash (stmaryrd)
18868 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18869 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18870 %* \textodot -> \varodot (stmaryrd)
18871 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18872 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18873 %* \textcircledcirc -> \ocirc (mathabx)
18874 %* \textcircledcirc -> \varocircle (stmaryrd)
18875 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18876 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18877 %* \textcircledast -> \varoast (stmaryrd)
18878 %* \textcircledast -> \oasterisk (mathabx)
18879 % U+229D CIRCLED DASH; \circleddash (AmS)
18880 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18881 % U+229E SQUARED PLUS; \boxplus (AmS)
18882 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18883 % U+229F SQUARED MINUS; \boxminus (AmS)
18884 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18885 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18886 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18887 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18888 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18889 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18890 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18891 %* \textvdash -> \rightvdash (MnSymbol)
18892 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
18893 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18894 %* \textdashv -> \leftvdash (MnSymbol)
18895 % \ndashv (mathabx)
18896 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18897 %* \textndashv -> \nleftvdash (MnSymbol)
18898 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
18899 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18900 %* \texttop -> \downvdash (MnSymbol)
18901 % \ndownvdash (MnSymbol)
18902 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18903 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18904 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18905 %* \textbot -> \upvdash (MnSymbol)
18906 % \nupvdash (MnSymbol)
18907 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18908 %* \textnupvdash -> \nperp (MnSymbol)
18909 % U+22A8 TRUE; \vDash (AmS)
18910 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8

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18911 %* \textvDash -> \models (LaTeX)
18912 %* \textvDash -> \rightmodels (MnSymbol)
18913 % U+22A9 FORCES; \Vdash (AmS)
18914 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18915 %* \textVdash -> \rightVdash (MnSymbol)
18916 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18917 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18918 % \nVdash (mathabx)
18919 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18920 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18921 % \VDash (mathabx)
18922 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18923 %* \textVDash -> \rightModels (MnSymbol)
18924 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18925 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
18926 %* \textnvDash -> \nrightvdash (MnSymbol)
18927 % U+22AD NOT TRUE; \nvDash (AmS)
18928 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18929 %* \textnvDash -> \nrightmodels (MnSymbol)
18930 %* \textnvDash -> \nmodels (MnSymbol)
18931 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18932 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18933 %* \textnVdash -> \nrightVdash (MnSymbol)
18934 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
18935 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18936 %* \textnVDash -> \nrightModels (MnSymbol)
18937 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18938 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18939 %* \textlhd -> \lessclosed (MnSymbol)
18940 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18941 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18942 %* \textrhd -> \gtrclosed (MnSymbol)
18943 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18944 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18945 %* \textunlhd -> \leqclosed (MnSymbol)
18946 %* \textunlhd -> \trianglelefteq (MnSymbol)
18947 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
18948 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18949 %* \textunrhd -> \geqclosed (MnSymbol)
18950 %* \textunrhd -> \trianglerighteq (MnSymbol)
18951 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18952 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18953 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18954 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18955 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18956 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18957 % U+22BB XOR; \veebar (AmS)
18958 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18959 % U+22BC NAND; \barwedge (mathabx)
18960 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18961 % U+22C6 STAR OPERATOR; \star (LaTeX)
18962 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6

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18963 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18964 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18965 % U+22C8 BOWTIE; \bowtie (LaTeX)
18966 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18967 %* \textbowtie -> \Bowtie (wasysym)
18968 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18969 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18970 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18971 % \rtimes (AmS)
18972 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18973 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18974 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18975 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18976 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18977 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18978 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18979 % \nbacksimeq (txfonts/pxfonts)
18980 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18981 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18982 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18983 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18984 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18985 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18986 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18987 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18988 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18989 % \nSubset (txfonts/pxfonts)
18990 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18991 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18992 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18993 % \nSupset (txfonts/pxfonts)
18994 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18995 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18996 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18997 %* \textCap -> \doublecap (mathabx)
18998 % U+22D3 DOUBLE UNION; \Cup (AmS)
18999 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19000 %* \textCup -> \doublecup (mathabx)
19001 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19002 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19003 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19004 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19005 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19006 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19007 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19008 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19009 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19010 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19011 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
19012 % \lesseqgtr (AmS)
19013 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19014 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19015 % \gtreqless (AmS)
19016 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB

19017 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19018 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19019 % \ncurlyeqprec (mathabx)
19020 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19021 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19022 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19023 % \ncurlyeqsucc (mathabx)
19024 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19025 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19026 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19027 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19028 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19029 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
font/pxfonts)
19030 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19031 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
font/pxfonts)
19032 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19033 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19034 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19035 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19036 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
abx)
19037 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19038 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19039 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19040 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19041 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19042 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19043 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19044 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19045 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19046 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19047 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19048 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19049 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19050 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright
leright (AmS)
19051 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19052 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19053 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19054 % \ntrianglelefteq (AmS)
19055 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19056 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19057 % \ntrianglerighteq (AmS)
19058 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19059 %* \textntrianglerighteq -> \textngeqclosed
19060 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
19061 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19062 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19063 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19064 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19065 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19066 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)

19067 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19068 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19069 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19070 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19071 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19072 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19073 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19074 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19075 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 19076 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19077 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19078 % U+231A WATCH; \clock (wasysym)
 19079 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19080 %* \textclock -> \Clocklogo (marvosym)
 19081 %* \textclock -> \ClockLogo (marvosym)
 19082 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19083 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19084 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19085 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19086 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19087 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19088 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19089 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19090 % U+2322 FROWN; \frown (LaTeX)
 19091 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19092 % U+2323 SMILE; \smile (LaTeX)
 19093 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19094 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19095 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19096 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
 19097 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19098 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
 19099 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 19100 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 19101 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 19102 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19103 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19104 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19105 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19106 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19107 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19108 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19109 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19110 % \notbackslash (wasysym)
 19111 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19112 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 19113 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19114 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19115 % \APLleftarrowbox (wasysym)
 19116 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347

19117 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19118 % \APLrightharrowbox (wasysym)
 19119 \DeclareTextCommand{\textAPLrightharrowbox}{PU}{\9043\110}%* U+2348
 19120 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 parrowbox (wasysym)
 19121 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19122 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19123 % \APLdownarrowbox (wasysym)
 19124 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19125 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19126 % \APLinput (wasysym)
 19127 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19128 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19129 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19130 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19131 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19132 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19133 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19134 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19135 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19136 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19137 % \ForwardToIndex (marvosym)
 19138 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19139 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19140 % \RewindToIndex (marvosym)
 19141 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19142 % U+2422 BLANK SYMBOL
 19143 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19144 % U+2423 OPEN BOX; blank
 19145 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19146 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19147 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19148 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19149 % U+2460 CIRCLED DIGIT ONE; onecircle
 19150 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19151 % U+2461 CIRCLED DIGIT TWO; twocircle
 19152 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19153 % U+2462 CIRCLED DIGIT THREE; threecircle
 19154 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19155 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19156 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19157 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19158 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19159 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19160 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19161 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle

19162 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
19163 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
19164 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
19165 % U+2468 CIRCLED DIGIT NINE; ninecircle
19166 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
19167 % U+2469 CIRCLED NUMBER TEN; tencircle
19168 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
19169 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
19170 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
19171 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
19172 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
19173 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
19174 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
19175 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
19176 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19177 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19178 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19179 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19180 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19181 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19182 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19183 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19184 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19185 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19186 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19187 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19188 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19189 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19190 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19191 % \CircledA (marvosym)
19192 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19193 %* \textCircledA -> \CleaningA
19194 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19195 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19196 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19197 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19198 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19199 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19200 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19201 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19202 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19203 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19204 % \CleaningF (marvosym)
19205 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19206 % \CleaningFF (marvosym)
19207 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19208 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
19209 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
19210 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
19211 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
19212 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
19213 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
19214 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
19215 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF

19216 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19217 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19218 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19219 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19220 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19221 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19222 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19223 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19224 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19225 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19226 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19227 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19228 % \CleaningP (marvosym)
 19229 \DeclareTextCompositeCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19230 % \CleaningPP (marvosym)
 19231 \DeclareTextCompositeCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19232 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19233 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19234 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19235 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19236 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19237 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19238 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19239 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19240 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19241 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19242 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19243 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19244 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19245 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19246 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19247 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19248 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19249 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19250 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19251 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19252 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19253 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19254 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19255 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19256 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19257 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19258 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19259 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19260 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19261 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19262 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19263 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19264 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19265 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19266 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19267 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19268 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19269 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

19270 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19271 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19272 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19273 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19274 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19275 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19276 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19277 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19278 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19279 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19280 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19281 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19282 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19283 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19284 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19285 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19286 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19287 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19288 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19289 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19290 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19291 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19292 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19293 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19294 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19295 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19296 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19297 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19298 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19299 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19300 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19301 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19302 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19303 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19304 % U+24EA CIRCLED DIGIT ZERO
 19305 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19306 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19307 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19308 %* \textCuttingLine -> \Kutline (marvosym)
 19309 %* \textCuttingLine -> \CutLine (marvosym)
 19310 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19311 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19312 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19313 %* \textUParrow -> \MoveUp (marvosym)
 19314 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19315 % \bigtriangleup (LaTeX)
 19316 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19317 %* \textbigtriangleup -> \APLup (wasysym)
 19318 %* \textbigtriangleup -> \Bleech (marvosym)

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19319 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19320 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19321 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19322 % whiterightpointingtriangle; \triangleright (LaTeX)
19323 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19324 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19325 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19326 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19327 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19328 %* \textDOWNarrow -> \MoveDown (marvosym)
19329 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
19330 % \bigtriangledown (LaTeX)
19331 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19332 %* \textbigtriangledown -> \APLdown (wasysym)
19333 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19334 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19335 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19336 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19337 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19338 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19339 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19340 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19341 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19342 %* \textdiamond -> \Diamond (wasysym)
19343 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19344 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19345 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19346 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19347 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19348 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19349 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19350 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19351 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19352 % \boxbar (stmaryrd)
19353 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19354 % U+25EF LARGE CIRCLE; largecircle
19355 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19356 %* \textbigcircle -> \varbigcirc (stmaryrd)
19357 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19358 % U+2601 CLOUD; \Cloud (ifsym)
19359 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19360 % U+2605 BLACK STAR; \FiveStar (bbding)
19361 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19362 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19363 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19364 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19365 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19366 %* \textPhone -> \Telefon (marvosym)
19367 % U+2610 BALLOT BOX; \boxempty (stmaryrd)

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19368 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19369 %* \textboxempty -> \Box (wasysym)
19370 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19371 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19372 %* \textCheckedbox -> \CheckedBox (marvosym)
19373 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19374 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19375 %* \textCrossedbox -> \XBox (wasysym)
19376 %* \textCrossedbox -> \CrossedBox (marvosym)
19377 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19378 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19379 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19380 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19381 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
19382 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19383 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19384 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19385 %* \textHandLeft -> \rightpointleft (fourier)
19386 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19387 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19388 %* \textHandRight -> \leftpointright (fourier)
19389 %* \textHandRight -> \PointingHand (marvosym)
19390 %* \textHandRight -> \Pointinghand (marvosym)
19391 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19392 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19393 %* \textRadioactivity -> \Radiation (ifsym)
19394 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19395 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19396 % U+2625 ANKH; \Ankh (marvosym)
19397 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19398 % U+262F YIN YANG; \YinYang (marvosym)
19399 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19400 %* \textYinYang -> \Yinyang (marvosym)
19401 %* \textYinYang -> \YingYang (marvosym)
19402 %* \textYinYang -> \Yingyang (marvosym)
19403 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19404 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19405 %* \textfrownie -> \Frowny (marvosym)
19406 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19407 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19408 %* \textsmiley -> \Smiley (marvosym)
19409 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19410 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19411 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19412 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19413 %* \textsun -> \Sun (marvosym)
19414 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19415 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19416 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19417 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19418 % U+263F MERCURY; \mercury (wasysym)
19419 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19420 %* \textmercury -> \Mercury (marvosym)
19421 % U+2640 FEMALE SIGN; female; \female (wasysym)

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19422 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19423 %* \textPUfemale -> \textfemale (tipx)
19424 %* \textPUfemale -> \female (wasysym)
19425 %* \textPUfemale -> \venus (wasysym)
19426 %* \textPUfemale -> \Venus (marvosym)
19427 %* \textPUfemale -> \Female (marvosym)
19428 % U+2641 EARTH; \earth (wasysym)
19429 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19430 %* \textearth -> \Earth (marvosym)
19431 % U+2642 MALE SIGN; \male, mars; \male (wasysym)
19432 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19433 %* \textmale -> \mars (wasysym)
19434 %* \textmale -> \Mars (marvosym)
19435 %* \textmale -> \Male (marvosym)
19436 % U+2643 JUPITER; \jupiter (wasysym)
19437 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19438 %* \textjupiter -> \Jupiter (marvosym)
19439 % U+2644 SATURN; \saturn (wasysym)
19440 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19441 %* \textsaturn -> \Saturn (marvosym)
19442 % U+2645 URANUS; \uranus (wasysym)
19443 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19444 %* \texturanus -> \Uranus (marvosym)
19445 % U+2646 NEPTUNE; \neptune (wasysym)
19446 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19447 %* \textneptune -> \Neptune (marvosym)
19448 % U+2647 PLUTO; \pluto (wasysym)
19449 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19450 %* \textpluto -> \Pluto (marvosym)
19451 % U+2648 ARIES; \aries (wasysym)
19452 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19453 %* \textaries -> \Aries (marvosym)
19454 % U+2649 TAURUS; \taurus (wasysym)
19455 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19456 %* \texttaurus -> \Taurus (marvosym)
19457 % U+264A GEMINI; \gemini (wasysym)
19458 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19459 %* \textgemini -> \Gemini (marvosym)
19460 % U+264B CANCER; \cancer (wasysym)
19461 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19462 %* \textcancer -> \Cancer (marvosym)
19463 % U+264C LEO; \leo (wasysym)
19464 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19465 %* \textleo -> \Leo (marvosym)
19466 % U+264D VIRGO; \virgo (wasysym)
19467 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19468 %* \textvirgo -> \Virgo (marvosym)
19469 % U+264E LIBRA; \libra (wasysym)
19470 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19471 %* \textlibra -> \Libra (marvosym)
19472 % U+264F SCORPIO; \scorpio (wasysym)
19473 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19474 %* \textscorpio -> \Scorpio (marvosym)
19475 % U+2650 SAGITTARIUS; \sagittarius (wasysym)

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19476 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19477 %* \textsagittarius -> \Sagittarius (marvosym)
19478 % U+2651 CAPRICORN; \capricornus (wasysym)
19479 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19480 %* \textcapricornus -> \Capricorn (marvosym)
19481 % U+2652 AQUARIUS; \aquarius (wasysym)
19482 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19483 %* \textaquarius -> \Aquarius (marvosym)
19484 % U+2653 PISCES; \pisces (wasysym)
19485 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19486 %* \textpisces -> \Pisces (marvosym)
19487 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19488 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19489 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19490 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19491 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19492 %* \textheartsuitwhite -> \Heart (marvosym)
19493 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19494 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19495 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19496 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19497 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19498 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19499 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19500 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19501 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19502 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19503 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19504 % U+2666 BLACK DIAMOND SUIT; diamond
19505 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19506 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19507 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19508 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19509 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19510 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19511 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}%* U+266A
19512 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19513 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19514 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19515 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19516 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19517 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19518 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19519 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19520 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19521 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19522 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19523 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19524 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19525 %* \textrecycle -> \Recycling (marvosym)
19526 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19527 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19528 % U+2691 BLACK FLAG; \Flag (ifsym)

19529 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19530 %* \textFlag -> \VarFlag (ifsym)
19531 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19532 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19533 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19534 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19535 %* \textdsmilitary -> \textxswup (fourier)
19536 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19537 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19538 % U+2696 SCALES; \dsjuridical (dictsym)
19539 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19540 % U+2697 ALEMBIC; \dschemical (dictsym)
19541 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19542 % U+2698 FLOWER; \dsbiological (dictsym)
19543 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19544 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19545 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19546 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19547 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19548 % U+26A0 WARNING SIGN; \danger (fourier)
19549 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19550 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19551 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19552 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19553 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
19554 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
19555 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19556 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19557 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
19558 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
19559 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
19560 % U+26AD MARRIAGE SYMBOL
19561 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
19562 % U+26AE DIVORCE SYMBOL
19563 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
19564 % U+26B2 NEUTER; \textunconfemale (tipx)
19565 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
19566 %* \textPUunconfemale -> \textunconfemale (tipx)
19567 % U+26B9 SEXTILE; \hexstar (wasysym)
19568 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
19569 % U+26BD SOCCER BALL; \Football (marvosym)
19570 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
19571 %* \textSoccerBall -> \Football (marvosym)
19572 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
19573 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
19574 % U+26C6 RAIN; \Rain (ifsym)
19575 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
19576 % U+26D4 NO ENTRY; \noway (fourier)
19577 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
19578 % U+26F0 MOUNTAIN; \Mountain (ifsym)
19579 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
19580 % U+26FA TENT; \Tent (ifsym)
19581 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19582 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
19583 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
19584 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
19585 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
19586 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
19587 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}% U+2702
19588 %* \textScissorRight -> \RightScissors (marvosym)
19589 %* \textScissorRight -> \Leftscissors (marvosym)
19590 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
19591 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}% U+2703
19592 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
19593 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}% U+2704
19594 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
19595 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}% U+2706
19596 % U+2707 TAPE DRIVE; \Tape (bding)
19597 \DeclareTextCommand{\textTape}{PU}{\9047\007}% U+2707
19598 % U+2708 AIRPLANE; \Plane (bding)
19599 \DeclareTextCommand{\textPlane}{PU}{\9047\010}% U+2708
19600 % U+2709 ENVELOPE; \Envelope (bding),
19601 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}% U+2709
19602 %* \textEnvelope -> \Letter (marvosym)
19603 % U+270C VICTORY HAND; \Peace (bding)
19604 \DeclareTextCommand{\textPeace}{PU}{\9047\014}% U+270C
19605 % U+270D WRITING HAND; \WritingHand (marvosym)
19606 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}% U+270D
19607 %* \textWritingHand -> \Writinghand (marvosym)
19608 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
19609 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}% U+270E
19610 % U+270F PENCIL; \PencilRight (bding)
19611 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}% U+270F
19612 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
19613 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}% U+2710
19614 % U+2711 WHITE NIB; \NibRight (bding)
19615 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}% U+2711
19616 % U+2712 BLACK NIB; \NibSolidRight (bding)
19617 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}% U+2712
19618 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
19619 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}% U+2713
19620 %* \textCheckmark -> \checkmark (MnSymbol)
19621 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
19622 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}% U+2714
19623 % U+2715 MULTIPLICATION X; \XSolid (bding)
19624 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}% U+2715
19625 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
19626 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}% U+2716
19627 % U+2717 BALLOT X; \XSolidBrush (bding)
19628 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}% U+2717
19629 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
19630 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}% U+2719
19631 % U+271A HEAVY GREEK CROSS; \Plus (bding)
19632 \DeclareTextCommand{\textPlus}{PU}{\9047\032}% U+271A
19633 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)

19634 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19635 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19636 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19637 % U+271D LATIN CROSS; \Cross (bding)
 19638 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19639 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19640 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19641 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19642 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19643 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19644 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19645 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19646 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19647 %* \textDavidStar -> \davidstar (wasysym)
 19648 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19649 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19650 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19651 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19652 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19653 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19654 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19655 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19656 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19657 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19658 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19659 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19660 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19661 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19662 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19663 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19664 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19665 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19666 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19667 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19668 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19669 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19670 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19671 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19672 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19673 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19674 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19675 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19676 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19677 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19678 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19679 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19680 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19681 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19682 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19683 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19684 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19685 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737

19686 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19687 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19688 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19689 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19690 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19691 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19692 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19693 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19694 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19695 % \SixFlowerOpenCenter (bding)
 19696 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19697 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19698 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19699 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19700 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19701 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19702 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19703 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19704 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19705 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19706 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19707 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19708 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19709 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19710 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19711 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19712 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19713 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19714 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19715 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19716 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19717 % U+2747 SPARKLE; \Sparkle (bding)
 19718 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19719 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19720 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19721 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19722 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19723 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19724 % \EightFlowerPetalRemoved (bding)
 19725 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19726 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19727 % \EightAsterisk (bding)
 19728 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19729 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19730 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19731 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19732 % \SquareShadowBottomRight (bding)
 19733 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F

19734 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19735 % \SquareShadowTopRight (bbding)
 19736 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19737 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19738 % \SquareCastShadowBottomRight (bbding)
 19739 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19740 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19741 % \SquareCastShadowTopRight (bbding)
 19742 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19743 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 19744 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19745 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19746 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19747 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19748 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19749 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19750 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19751 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19752 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19753 % \notperp (mathabx)
 19754 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19755 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19756 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19757 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19758 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19759 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19760 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19761 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19762 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19763 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19764 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19765 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19766 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19767 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19768 % \circlearrowleft (AmS)
 19769 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19770 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19771 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19772 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19773 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19774 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19775 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19776 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 19777 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
 19778 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19779 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19780 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19781 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19782 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)

19783 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\372}%* U+27FA
 19784 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19785 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19786 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19787 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19788 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19789 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19790 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19791 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19792 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 19793 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19794 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 19795 \DeclareTextCommand{\texthooknwarrow}{PU}{\9051\043}%* U+2923
 19796 % U+2924 NORTH EAST ARROW WITH HOOK; \hooknearrow (MnSymbol)
 19797 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19798 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 19799 \DeclareTextCommand{\texthooksearrow}{PU}{\9051\045}%* U+2925
 19800 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
 19801 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19802 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19803 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19804 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19805 % \rcurvearrowne (MnSymbol)
 19806 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19807 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19808 % \lcurvearrowse (MnSymbol)
 19809 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19810 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19811 % \lcurvearrowsw (MnSymbol)
 19812 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19813 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19814 % \rcurvearrowse (MnSymbol)
 19815 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19816 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 19817 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19818 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19819 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19820 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 19821 % \rcurvearrowdown (MnSymbol)
 19822 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 19823 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 19824 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 19825 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)

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19826 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
19827 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19828 % \rcurvearrowright (MnSymbol)
19829 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
19830 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
19831 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19832 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
19833 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19834 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19835 % \updownharpoonrightleft (MnSymbol)
19836 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19837 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19838 % \updownharpoonleftright (MnSymbol)
19839 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19840 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19841 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19842 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19843 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19844 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19845 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19846 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
19847 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19848 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19849 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19850 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19851 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19852 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19853 % \leftbarharpoon (mathabx)
19854 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19855 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19856 % LONG DASH; \barleftharpoon (mathabx)
19857 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19858 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19859 % LONG DASH; \rightbarharpoon (mathabx)
19860 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19861 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19862 % LONG DASH; \barrightharpoon (mathabx)
19863 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
19864 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19865 % WITH BARB RIGHT; \updownharpoons (mathabx)
19866 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19867 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON
19868 % WITH BARB RIGHT; \downupharpoons (mathabx)
19869 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
19870 % U+297F DOWN FISH TAIL
19871 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

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51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19872 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \llparenthesis (stmaryrd)
 19873 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19874 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19875 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19876 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19877 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19878 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19879 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19880 %* \textobar -> \textvarobar (stmaryrd)
 19881 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19882 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19883 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19884 %* \textobslash -> \obackslash (mathabx)
 19885 %* \textobslash -> \varobslash (stmaryrd)
 19886 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19887 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19888 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19889 %* \textobot -> \odplus (ulsy)
 19890 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 19891 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19892 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19893 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19894 %* \textolessthan -> \varolessthan (stmaryrd)
 19895 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19896 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19897 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19898 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19899 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19900 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19901 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19902 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19903 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19904 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19905 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19906 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19907 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19908 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19909 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19910 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19911 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19912 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19913 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19914 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19915 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19916 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19917 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19918 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19919 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19920 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19921 % pxfonts, wasysym)
 19922 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D

19923 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19924 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19925 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19926 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19927 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19928 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19929 %* \textminusdot -> \divdot (mathabx)
 19930 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 19931 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19932 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19933 % \dtimes (mathdesign)
 19934 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19935 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19936 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19937 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19938 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19939 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19940 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19941 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19942 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19943 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19944 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 19945 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 19946 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 19947 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 19948 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 19949 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 19950 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 19951 %* \textdoublevee -> \merge (stmaryrd)
 19952 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 19953 % \doublebarwedge (AmS)
 19954 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 19955 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 19956 % \veedoublebar (mahtabx)
 19957 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 19958 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 19959 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 19960 % \neqdot (MnSymbol)
 19961 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 19962 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 19963 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 19964 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 19965 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 19966 % \nleqslant (txfonts/pxfonts)
 19967 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 19968 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 19969 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 19970 % \ngeqslant (txfonts/pxfonts)
 19971 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 19972 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 19973 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 19974 % \nlessapprox (txfonts/pxfonts)
 19975 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 19976 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)

19977 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 19978 % \ngtrapprox (txfonts/pxfonts)
 19979 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 19980 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 19981 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 19982 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 19983 % \gneq (AmS)
 19984 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 19985 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 19986 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19987 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 19988 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19989 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 19990 % \lesseqqgtr (AmS)
 19991 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 19992 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 19993 % \gtreqqless (AmS)
 19994 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 19995 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19996 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19997 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19998 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19999 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20000 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20001 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20002 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20003 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 20004 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20005 % \npreceq (txfonts/pxfonts)
 20006 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20007 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 20008 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20009 % \nsucceq (txfonts/pxfonts)
 20010 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20011 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20012 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20013 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20014 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20015 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20016 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20017 % \npreceqq (txfonts/pxfonts)
 20018 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20019 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20020 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20021 % \nsucceqq (txfonts/pxfonts)
 20022 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20023 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20024 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5

20025 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20026 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20027 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20028 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20029 % \nprecapprox (txfonts/pxfonts)
 20030 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20031 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20032 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20033 % \nsuccapprox (txfonts/pxfonts)
 20034 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20035 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
 20036 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20037 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
 20038 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20039 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20040 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20041 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20042 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20043 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20044 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20045 % \nsupseteqq (mathabx)
 20046 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20047 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20048 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20049 %* \textdashV -> \leftVdash (MnSymbol)
 20050 % \ndashV (mathabx)
 20051 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20052 %* \textndashV -> \nleftVdash (MnSymbol)
 20053 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20054 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20055 %* \textDashv -> \leftmodels (MnSymbol)
 20056 % \nDashv (mathabx)
 20057 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20058 %* \textnDashv -> \nleftmodels (MnSymbol)
 20059 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20060 % \DashV (mathabx)
 20061 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20062 %* \textDashV -> \leftModels (MnSymbol)
 20063 % \nDashV (mathabx)
 20064 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20065 %* \textnDashV -> \nleftModels (MnSymbol)
 20066 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20067 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20068 % \ndownmodels (MnSymbol)
 20069 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20070 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20071 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20072 % \nupmodels (MnSymbol)
 20073 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20074 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20075 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20076 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;

20077 % \interleave (stmaryrd)
 20078 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20079 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20080 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20081 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20082 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20083 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20084 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20085 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20086 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20087 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20088 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20089 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20090 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20091 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20092 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20093 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20094 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20095 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20096 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20097 % \textdownstep (tipa)
 20098 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20099 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20100 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20101 %* \textPUheng -> \textheng (tipx)
 20102 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20103 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20104 %* \textPULhookfour -> \textlhookfour (tipx)
 20105 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20106 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20107 %* \textPUscf -> \textscf (tipx)
 20108 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 20109 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20110 %* \textPUaolig -> \textao lig (tipx)
 20111 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20112 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20113 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20114 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20115 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20116 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20117 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20118 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20119 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
20120 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
20121 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
20122 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
20123 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
20124 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
20125 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
20126 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
20127 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
20128 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
20129 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
20130 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
20131 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
20132 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
20133 %* \textfullnote -> \Ganz (harmony)
20134 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
20135 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
20136 %* \texthalfnote -> \Halb (harmony)
20137 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
20138 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
20139 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
20140 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
20141 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
20142 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
20143 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
20144 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20145 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
20146 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
20147 % U+1F319 CRESCENT MOON; \Moon (marvosym)
20148 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
20149 % U+1F468 MAN; \ManFace (marvosym)
20150 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
20151 % U+1F469 WOMAN; \WomanFace (marvosym)
20152 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
20153 %* \textWomanFace -> \Womanface (marvosym)
20154 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
20155 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
20156 %* \textFax -> \Faxmachine (marvosym)
20157 % U+1F525 FIRE; \Fire (ifsym)
20158 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20159 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
20160 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20161 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20162 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20163 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20164 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

```

20165 \DeclareTextCommand{\SS}{PU}{SS}%
20166 % \textcopyleft (textcomp)
20167 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20168 % \ccnc (ccllicenses)
20169 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20170 % \ccnd (ccllicenses)
20171 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20172 % \ccsa (ccllicenses)
20173 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20174 % \Info (marvosym, china2e)
20175 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20176 % \CESign (marvosym)
20177 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20178 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20179 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20180 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20181 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20182 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20183 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20184 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20185 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20186 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20187 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20188 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20189 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20190 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20191 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20192 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20193 <*puvnenc>
20194 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20195 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20196 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20197 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20198 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20199 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20200 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20201 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20202 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20203 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20204 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20205 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20206 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20207 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1

```

20208 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20209 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20210 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20211 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20212 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20213 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20214 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20215 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20216 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20217 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20218 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20219 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20220 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20221 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20222 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20223 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20224 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20225 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20226 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20227 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20228 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20229 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20230 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20231 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20232 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20233 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20234 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20235 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20236 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20237 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20238 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20239 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20240 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20241 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20242 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20243 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20244 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20245 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20246 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20247 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20248 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20249 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20250 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20251 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20252 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20253 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20254 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20255 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20256 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20257 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20258 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20259 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20260 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20261 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

20262 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20263 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20264 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20265 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20266 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20267 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20268 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20269 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20270 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20271 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20272 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20273 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20274 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20275 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20276 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20277 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20278 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20279 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20280 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20281 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20282 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20283 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20284 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20285 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20286 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20287 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20288 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20289 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20290 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20291 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20292 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20293 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20294 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20295 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20296 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20297 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20298 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20299 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20300 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20301 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20302 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20303 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20304 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20305 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20306 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20307 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20308 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20309 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20310 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20311 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20312 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20313 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20314 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20315 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168

```

20316 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20317 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20318 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
20319 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20320 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20321 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20322 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20323 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20324 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20325 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20326 (/puvnc)

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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20327 (*puarenc)
20328 % U+0621;afii57409;ARABIC LETTER HAMZA
20329 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20330 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20331 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20332 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20333 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20334 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20335 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20336 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20337 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20338 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20339 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20340 % U+0627;afii57415;ARABIC LETTER ALEF
20341 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20342 % U+0628;afii57416;ARABIC LETTER BEH
20343 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20344 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20345 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20346 % U+062A;afii57418;ARABIC LETTER TEH
20347 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20348 % U+062B;afii57419;ARABIC LETTER THEH
20349 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20350 % U+062C;afii57420;ARABIC LETTER JEEM
20351 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20352 % U+062D;afii57421;ARABIC LETTER HAH
20353 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20354 % U+062E;afii57422;ARABIC LETTER KHAH
20355 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20356 % U+062F;afii57423;ARABIC LETTER DAL
20357 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20358 % U+0630;afii57424;ARABIC LETTER THAL
20359 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20360 % U+0631;afii57425;ARABIC LETTER REH
20361 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20362 % U+0632;afii57426;ARABIC LETTER ZAIN
20363 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20364 % U+0633;afii57427;ARABIC LETTER SEEN

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20365 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20366 % U+0634;afii57428;ARABIC LETTER SHEEN
 20367 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20368 % U+0635;afii57429;ARABIC LETTER SAD
 20369 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20370 % U+0636;afii57430;ARABIC LETTER DAD
 20371 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20372 % U+0637;afii57431;ARABIC LETTER TAH
 20373 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20374 % U+0638;afii57432;ARABIC LETTER ZAH
 20375 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20376 % U+0639;afii57433;ARABIC LETTER AIN
 20377 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20378 % U+063A;afii57434;ARABIC LETTER GHAIN
 20379 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20380 % U+0640;afii57440;ARABIC TATWEEL
 20381 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20382 % U+0641;afii57441;ARABIC LETTER FEH
 20383 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20384 % U+0642;afii57442;ARABIC LETTER QAF
 20385 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20386 % U+0643;afii57443;ARABIC LETTER KAF
 20387 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20388 % U+0644;afii57444;ARABIC LETTER LAM
 20389 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20390 % U+0645;afii57445;ARABIC LETTER MEEM
 20391 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20392 % U+0646;afii57446;ARABIC LETTER NOON
 20393 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20394 % U+0647;afii57470;ARABIC LETTER HEH
 20395 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20396 % U+0648;afii57448;ARABIC LETTER WAW
 20397 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20398 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20399 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20400 % U+064A;afii57450;ARABIC LETTER YEH
 20401 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A
 20402 % U+064B;afii57451;ARABIC FATHATAN
 20403 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20404 % U+064C;afii57452;ARABIC DAMMATAN
 20405 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20406 % U+064D;afii57453;ARABIC KASRATAN
 20407 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20408 % U+064E;afii57454;ARABIC FATHA
 20409 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20410 % U+064F;afii57455;ARABIC DAMMA
 20411 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20412 % U+0650;afii57456;ARABIC KASRA
 20413 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20414 % U+0651;afii57457;ARABIC SHADDA
 20415 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20416 % U+0652;afii57458;ARABIC SUKUN
 20417 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi

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20418 % U+067E ARABIC LETTER PEH; afi57506
20419 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
20420 % U+0686 ARABIC LETTER TCHEH; afi57507
20421 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
20422 % U+0698 ARABIC LETTER JEH; afi57508
20423 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
20424 % U+06A9 ARABIC LETTER KEHEH
20425 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
20426 % U+06AF ARABIC LETTER GAF; afi57509
20427 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
20428 % U+06CC ARABIC LETTER FAR.SI YEH
20429 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

20430 % U+200C ZERO WIDTH NON-JOINER; afi61664
20431 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
20432 % U+200D ZERO WIDTH JOINER; afi301
20433 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

20434 (/puarenc)

20435 (*psdextra)
20436 \Hy@VersionCheck{psdextra.def}
20437 \newcommand*{\psdmapshortnames}{%
20438   \let\MVPlus\textMVPlus
20439   \let\MVComma\textMVComma
20440   \let\MVMinus\textMVMinus
20441   \let\MVPeriod\textMVPeriod
20442   \let\MVDivision\textMVDivision
20443   \let\MVZero\textMVZero
20444   \let\MVOne\textMVOne
20445   \let\MVTwo\textMVTwo
20446   \let\MVThree\textMVThree
20447   \let\MVFour\textMVFour
20448   \let\MVFive\textMVFive
20449   \let\MVSix\textMVSix
20450   \let\MVSeven\textMVSeven
20451   \let\MVEight\textMVEight
20452   \let\MVNine\textMVNine
20453   \let\MVAt\textMVAt
20454   \let\copyright\textcopyright
20455   \let\twosuperior\texttwosuperior
20456   \let\threesuperior\textthreesuperior
20457   \let\onesuperior\textonesuperior
20458   \let\Thorn\textThorn
20459   \let\thorn\textthorn
20460   \let\hbar\texthbar
20461   \let\hausaB\texthausaB
20462   \let\hausaD\texthausaD
20463   \let\hausaK\texthausaK
20464   \let\barl\textbarl
20465   \let\inve\textinve
20466   \let\slashc\textslashc
20467   \let\scripta\textscripta
20468   \let\openo\textopeno
20469   \let\rtaild\textrtaild

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20470 \let\reve\textreve
 20471 \let\schwa\textschwa
 20472 \let\niepsilon\textniepsilon
 20473 \let\repsilon\textrepsilon
 20474 \let\rhookrepsilon\textrho\textrepsilon
 20475 \let\scriptg\textscriptg
 20476 \let\scg\textscg
 20477 \let\ipagamma\textipagamma
 20478 \let\babygamma\textbabygamma
 20479 \let\bari\textbari
 20480 \let\niiota\textniiota
 20481 \let\sci\textsci
 20482 \let\scn\textscn
 20483 \let\niphi\textniphi
 20484 \let\longleg\textlongleg
 20485 \let\scr\textscr
 20486 \let\invscr\textinvscr
 20487 \let\esh\textesh
 20488 \let\baru\textbaru
 20489 \let\niupsilon\textniupsilon
 20490 \let\scriptv\textscriptv
 20491 \let\turnv\textturnv
 20492 \let\turnw\textturnw
 20493 \let\turny\textturny
 20494 \let\scy\textscy
 20495 \let\yogh\textyogh
 20496 \let\glotstop\textglotstop
 20497 \let\revglotstop\textrevglotstop
 20498 \let\invglotstop\textinvglotstop
 20499 \let\Gamma\textGamma
 20500 \let\Delta\textDelta
 20501 \let\Theta\textTheta
 20502 \let\Lambda\textLambda
 20503 \let\Xi\textXi
 20504 \let\Pi\textPi
 20505 \let\Sigma\textSigma
 20506 \let\Upsilon\textUpsilon
 20507 \let\Phi\textPhi
 20508 \let\Psi\textPsi
 20509 \let\Omega\textOmega
 20510 \let\alpha\textalpha
 20511 \let\beta\textbeta
 20512 \let\gamma\textgamma
 20513 \let\delta\textdelta
 20514 \let\epsilon\textepsilon
 20515 \let\zeta\textzeta
 20516 \let\eta\texteta
 20517 \let\theta\texttheta
 20518 \let\iota\textiota
 20519 \let\kappa\textkappa
 20520 \let\lambda\textlambda
 20521 \let\mu\textmu
 20522 \let\mugreek\textmugreek
 20523 \let\nu\textnu

20524 `\let\xi\textxi`
 20525 `\let\pi\textpi`
 20526 `\let\rho\textrho`
 20527 `\let\varsigma\textvarsigma`
 20528 `\let\sigma\textsigma`
 20529 `\let\tau\texttau`
 20530 `\let\upsilon\textupsilon`
 20531 `\let\phi\textphi`
 20532 `\let\chi\textchi`
 20533 `\let\psi\textpsi`
 20534 `\let\omega\textomega`
 20535 `\let\scd\textscd`
 20536 `\let\scu\textscu`
 20537 `\let\iinferior\textiinferior`
 20538 `\let\rinferior\textrinferior`
 20539 `\let\uinferior\textuinferior`
 20540 `\let\vinferior\textvinferior`
 20541 `\let\betainferior\textbetainferior`
 20542 `\let\gammainferior\textgammainferior`
 20543 `\let\rhoinferior\textrhoinferior`
 20544 `\let\phiinferior\textphiinferior`
 20545 `\let\chiinferior\textchiinferior`
 20546 `\let\barsci\textbarsci`
 20547 `\let\barp\textbarp`
 20548 `\let\barscu\textbarscu`
 20549 `\let\htrtaild\texthtrtaild`
 20550 `\let\dagger\textdagger`
 20551 `\let\bullet\textbullet`
 20552 `\let\hdotfor\texthdotfor`
 20553 `\let\prime\textprime`
 20554 `\let\second\textsecond`
 20555 `\let\third\textthird`
 20556 `\let\backprime\textbackprime`
 20557 `\let\lefttherefore\textlefttherefore`
 20558 `\let\fourth\textfourth`
 20559 `\let\diamonddots\textdiamonddots`
 20560 `\let\zerosuperior\textzerosuperior`
 20561 `\let\isuperior\textisuperior`
 20562 `\let\foursuperior\textfoursuperior`
 20563 `\let\fivesuperior\textfivesuperior`
 20564 `\let\sixsuperior\textsixsuperior`
 20565 `\let\sevensuperior\textsevensuperior`
 20566 `\let\eightsuperior\texteightsuperior`
 20567 `\let\ninesuperior\textninesuperior`
 20568 `\let\plussuperior\textplussuperior`
 20569 `\let\minussuperior\textminussuperior`
 20570 `\let>equalsuperior\textequalsuperior`
 20571 `\let\parenleftsuperior\textparenleftsuperior`
 20572 `\let\parenrightsuperior\textparenrightsuperior`
 20573 `\let\nsuperior\textnsuperior`
 20574 `\let\zeroinferior\textzeroinferior`
 20575 `\let\oneinferior\textoneinferior`
 20576 `\let\twoinferior\texttwoinferior`
 20577 `\let\threeinferior\textthreeinferior`

20578 \let\fourinferior\textfourinferior
 20579 \let\fiveinferior\textfiveinferior
 20580 \let\sixinferior\textsixinferior
 20581 \let\seveninferior\textseveninferior
 20582 \let\eightinferior\texteightinferior
 20583 \let\nineinferior\textnineinferior
 20584 \let\plusinferior\textplusinferior
 20585 \let\minusinferior\textminusinferior
 20586 \let\equalsinferior\textequalsinferior
 20587 \let\parenleftinferior\textparenleftinferior
 20588 \let\parenrightinferior\textparenrightinferior
 20589 \let\ainferior\textainferior
 20590 \let\einferior\texteinferior
 20591 \let\oinferior\textoinferior
 20592 \let\xinferior\textxinferior
 20593 \let\schwainferior\textschwainferior
 20594 \let\hinferior\texthinferior
 20595 \let\kinferior\textkinferior
 20596 \let\linferior\textlinferior
 20597 \let\minferior\textminferior
 20598 \let\ninferior\textninferior
 20599 \let\pinferior\textpinferior
 20600 \let\sinferior\textsinferior
 20601 \let\tinferior\texttinferior
 20602 \let\Deleatur\textDeleatur
 20603 \let\hslash\texthslash
 20604 \let\Im\textIm
 20605 \let\ell\textell
 20606 \let\wp\textwp
 20607 \let\Re\textRe
 20608 \let\mho\textmho
 20609 \let\riota\textriota
 20610 \let\Finv\textFinv
 20611 \let\aleph\textaleph
 20612 \let\beth\textbeth
 20613 \let\gimel\textgimel
 20614 \let\daleth\textdaleth
 20615 \let\xfax\textfax
 20616 \let\Game\textGame
 20617 \let\leftarrow\textleftarrow
 20618 \let\uparrow\textuparrow
 20619 \let\rightarrow\textrightarrow
 20620 \let\downarrow\textdownarrow
 20621 \let\leftrightarrow\textleftrightarrow
 20622 \let\updownarrow\textupdownarrow
 20623 \let\rightarrowtail\textrightarrowtail
 20624 \let\searrow\textsearrow
 20625 \let\swarrow\textswarrow
 20626 \let\rightarrowtail\textrightarrowtail
 20627 \let\rightarrowtail\textrightarrowtail
 20628 \let\rightarrowtail\textrightarrowtail
 20629 \let\rightarrowtail\textrightarrowtail
 20630 \let\rightarrowtail\textrightarrowtail
 20631 \let\rightarrowtail\textrightarrowtail

20632 `\let\twoheadrightarrow\texttwoheadrightarrow`
 20633 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
 20634 `\let\twoheaddownarrow\texttwoheaddownarrow`
 20635 `\let\leftarrowtail\textleftarrowtail`
 20636 `\let\rightarrowtail\textrightarrowtail`
 20637 `\let\mapsto\textmapsto`
 20638 `\let\hookleftarrow\texthookleftarrow`
 20639 `\let\hookrightarrow\texthookrightarrow`
 20640 `\let\looparrowleft\textlooparrowleft`
 20641 `\let\looparrowright\textlooparrowright`
 20642 `\let\leftrightarrow\textleftrightarrow`
 20643 `\let\lightning\textlightning`
 20644 `\let\dlsh\textdlsh`
 20645 `\let\curvearrowleft\textcurvearrowleft`
 20646 `\let\curvearrowright\textcurvearrowright`
 20647 `\let\leftharpoonup\textleftharpoonup`
 20648 `\let\leftharpoondown\textleftharpoondown`
 20649 `\let\upharpoonright\textupharpoonright`
 20650 `\let\upharpoonleft\textupharpoonleft`
 20651 `\let\upharpoonright\textupharpoonright`
 20652 `\let\upharpoonleft\textupharpoonleft`
 20653 `\let\downharpoonright\textdownharpoonright`
 20654 `\let\downharpoonleft\textdownharpoonleft`
 20655 `\let\rightleftarrows\textrightleftarrows`
 20656 `\let\updownarrows\textupdownarrows`
 20657 `\let\leftrightarrows\textleftrightarrows`
 20658 `\let\leftleftarrows\textleftleftarrows`
 20659 `\let\upuparrows\textupuparrows`
 20660 `\let\righttrightarrows\textrighttrightarrows`
 20661 `\let\downdownarrows\textdowndownarrows`
 20662 `\let\leftrightharpoons\textleftrightharpoons`
 20663 `\let\rightleftharpoons\textrightleftharpoons`
 20664 `\let\leftarrow\textleftarrow`
 20665 `\let\rightarrow\textrightarrow`
 20666 `\let\Leftarrow\textLeftarrow`
 20667 `\let\Rightarrow\textRightarrow`
 20668 `\let\Uparrow\textUparrow`
 20669 `\let\Downarrow\textDownarrow`
 20670 `\let\Leftrightarrow\textLeftrightarrow`
 20671 `\let\Updownarrow\textUpdownarrow`
 20672 `\let\Nwarrow\textNwarrow`
 20673 `\let\Nearrow\textNearrow`
 20674 `\let\searrow\textsearrow`
 20675 `\let\swarrow\textswarrow`
 20676 `\let\lleftarrow\textlleftarrow`
 20677 `\let\rrightarrow\textrightarrow`
 20678 `\let\leftsquigarrow\textleftsquigarrow`
 20679 `\let\rightsquigarrow\textrightsquigarrow`
 20680 `\let\dashleftarrow\textdashleftarrow`
 20681 `\let\dasheduparrow\textdasheduparrow`
 20682 `\let\dashrightarrow\textdashrightarrow`
 20683 `\let\dasheddownarrow\textdasheddownarrow`
 20684 `\let\pointer\textpointer`

20686 $\backslash\text{let}\downarrows\text{textdownarrows}$
 20687 $\backslash\text{let}\leftarrow\text{textleftarrow}$
 20688 $\backslash\text{let}\rightarrow\text{textrightarrow}$
 20689 $\backslash\text{let}\leftrightarrows\text{textleftrightarrow}$
 20690 $\backslash\text{let}\forall\text{textforall}$
 20691 $\backslash\text{let}\complement\text{textcomplement}$
 20692 $\backslash\text{let}\partial\text{textpartial}$
 20693 $\backslash\text{let}\exists\text{textexists}$
 20694 $\backslash\text{let}\nexists\text{textnexists}$
 20695 $\backslash\text{let}\emptyset\text{textemptyset}$
 20696 $\backslash\text{let}\triangle\text{texttriangle}$
 20697 $\backslash\text{let}\nabla\text{textnabla}$
 20698 $\backslash\text{let}\in\text{textin}$
 20699 $\backslash\text{let}\notin\text{textnotin}$
 20700 $\backslash\text{let}\smallin\text{textsmallin}$
 20701 $\backslash\text{let}\ni\text{textni}$
 20702 $\backslash\text{let}\notowner\text{textnotowner}$
 20703 $\backslash\text{let}\smallowns\text{textsmallowns}$
 20704 $\backslash\text{let}\prod\text{textprod}$
 20705 $\backslash\text{let}\amalg\text{textamalg}$
 20706 $\backslash\text{let}\sum\text{textsum}$
 20707 $\backslash\text{let}\mp\text{textmp}$
 20708 $\backslash\text{let}\dotplus\text{textdotplus}$
 20709 $\backslash\text{let}\Divides\text{textDivides}$
 20710 $\backslash\text{let}\DividesNot\text{textDividesNot}$
 20711 $\backslash\text{let}\setminus\text{textsetminus}$
 20712 $\backslash\text{let}\ast\text{textast}$
 20713 $\backslash\text{let}\circ\text{textcirc}$
 20714 $\backslash\text{let}\surd\text{textsurd}$
 20715 $\backslash\text{let}\propto\text{textpropto}$
 20716 $\backslash\text{let}\infty\text{textinfty}$
 20717 $\backslash\text{let}\angle\text{textangle}$
 20718 $\backslash\text{let}\measuredangle\text{textmeasuredangle}$
 20719 $\backslash\text{let}\sphericalangle\text{textsphericalangle}$
 20720 $\backslash\text{let}\mid\text{textmid}$
 20721 $\backslash\text{let}\nmid\text{textnmid}$
 20722 $\backslash\text{let}\parallel\text{textparallel}$
 20723 $\backslash\text{let}\nparallel\text{textnparallel}$
 20724 $\backslash\text{let}\wedge\text{textwedge}$
 20725 $\backslash\text{let}\owedge\text{textowedge}$
 20726 $\backslash\text{let}\vee\text{textvee}$
 20727 $\backslash\text{let}\ovee\text{textovee}$
 20728 $\backslash\text{let}\cap\text{textcap}$
 20729 $\backslash\text{let}\cup\text{textcup}$
 20730 $\backslash\text{let}\int\text{textint}$
 20731 $\backslash\text{let}\iint\text{textiint}$
 20732 $\backslash\text{let}\iiint\text{textiiint}$
 20733 $\backslash\text{let}\oint\text{textoint}$
 20734 $\backslash\text{let}\oiint\text{textoiint}$
 20735 $\backslash\text{let}\ointclockwise\text{textointclockwise}$
 20736 $\backslash\text{let}\ointctrackwise\text{textointctrackwise}$
 20737 $\backslash\text{let}\therefore\text{texttherefore}$
 20738 $\backslash\text{let}\because\text{textbecause}$
 20739 $\backslash\text{let}\vdots\text{textvdots}$

20740 $\backslash\text{let}\backslash\text{squaredots}\backslash\text{textsquaredots}$
 20741 $\backslash\text{let}\backslash\text{dotminus}\backslash\text{textdotminus}$
 20742 $\backslash\text{let}\backslash\text{eqcolon}\backslash\text{texteqcolon}$
 20743 $\backslash\text{let}\backslash\text{sim}\backslash\text{textsims}$
 20744 $\backslash\text{let}\backslash\text{backsim}\backslash\text{textbacksim}$
 20745 $\backslash\text{let}\backslash\text{nbacksim}\backslash\text{textnbacksim}$
 20746 $\backslash\text{let}\backslash\text{wr}\backslash\text{textwr}$
 20747 $\backslash\text{let}\backslash\text{nsim}\backslash\text{textnsim}$
 20748 $\backslash\text{let}\backslash\text{eqsim}\backslash\text{texteqsim}$
 20749 $\backslash\text{let}\backslash\text{neqsim}\backslash\text{textneqsim}$
 20750 $\backslash\text{let}\backslash\text{simeq}\backslash\text{textsimeq}$
 20751 $\backslash\text{let}\backslash\text{nsimeq}\backslash\text{textnsimeq}$
 20752 $\backslash\text{let}\backslash\text{cong}\backslash\text{textcong}$
 20753 $\backslash\text{let}\backslash\text{ncong}\backslash\text{textncong}$
 20754 $\backslash\text{let}\backslash\text{approx}\backslash\text{textapprox}$
 20755 $\backslash\text{let}\backslash\text{napprox}\backslash\text{textnapprox}$
 20756 $\backslash\text{let}\backslash\text{approxeq}\backslash\text{textapproxeq}$
 20757 $\backslash\text{let}\backslash\text{napproxeq}\backslash\text{textnapproxeq}$
 20758 $\backslash\text{let}\backslash\text{triplesim}\backslash\text{texttriplesim}$
 20759 $\backslash\text{let}\backslash\text{ntriplesim}\backslash\text{textntriplesim}$
 20760 $\backslash\text{let}\backslash\text{backcong}\backslash\text{textbackcong}$
 20761 $\backslash\text{let}\backslash\text{nbackcong}\backslash\text{textnbackcong}$
 20762 $\backslash\text{let}\backslash\text{asympt}\backslash\text{textasympt}$
 20763 $\backslash\text{let}\backslash\text{nasympt}\backslash\text{textnasympt}$
 20764 $\backslash\text{let}\backslash\text{Bumpeq}\backslash\text{textBumpeq}$
 20765 $\backslash\text{let}\backslash\text{nBumpeq}\backslash\text{textnBumpeq}$
 20766 $\backslash\text{let}\backslash\text{bumpeq}\backslash\text{textbumpeq}$
 20767 $\backslash\text{let}\backslash\text{nbumpeq}\backslash\text{textnbumpeq}$
 20768 $\backslash\text{let}\backslash\text{doteq}\backslash\text{textdoteq}$
 20769 $\backslash\text{let}\backslash\text{ndoteq}\backslash\text{textndoteq}$
 20770 $\backslash\text{let}\backslash\text{doteqdot}\backslash\text{textdoteqdot}$
 20771 $\backslash\text{let}\backslash\text{nDoteq}\backslash\text{textnDoteq}$
 20772 $\backslash\text{let}\backslash\text{fallingdoteq}\backslash\text{textfallingdoteq}$
 20773 $\backslash\text{let}\backslash\text{nfallingdoteq}\backslash\text{textnfallingdoteq}$
 20774 $\backslash\text{let}\backslash\text{risingdoteq}\backslash\text{textrisingdoteq}$
 20775 $\backslash\text{let}\backslash\text{nrisingdoteq}\backslash\text{textnrisingdoteq}$
 20776 $\backslash\text{let}\backslash\text{colonequals}\backslash\text{textcolonequals}$
 20777 $\backslash\text{let}\backslash\text{equalscolon}\backslash\text{textequalscolon}$
 20778 $\backslash\text{let}\backslash\text{eqcirc}\backslash\text{texteqcirc}$
 20779 $\backslash\text{let}\backslash\text{neqcirc}\backslash\text{textneqcirc}$
 20780 $\backslash\text{let}\backslash\text{circeq}\backslash\text{textcirceq}$
 20781 $\backslash\text{let}\backslash\text{ncirceq}\backslash\text{textncirceq}$
 20782 $\backslash\text{let}\backslash\text{hateq}\backslash\text{texthateq}$
 20783 $\backslash\text{let}\backslash\text{nhateq}\backslash\text{textnhateq}$
 20784 $\backslash\text{let}\backslash\text{triangleeq}\backslash\text{texttriangleeq}$
 20785 $\backslash\text{let}\backslash\text{neq}\backslash\text{textneq}$
 20786 $\backslash\text{let}\backslash\text{ne}\backslash\text{textne}$
 20787 $\backslash\text{let}\backslash\text{equiv}\backslash\text{textequiv}$
 20788 $\backslash\text{let}\backslash\text{nequiv}\backslash\text{textnequiv}$
 20789 $\backslash\text{let}\backslash\text{leq}\backslash\text{textleq}$
 20790 $\backslash\text{let}\backslash\text{le}\backslash\text{textle}$
 20791 $\backslash\text{let}\backslash\text{geq}\backslash\text{textgeq}$
 20792 $\backslash\text{let}\backslash\text{ge}\backslash\text{textge}$
 20793 $\backslash\text{let}\backslash\text{leqq}\backslash\text{textleqq}$

20794 \let\nleqq\textnleqq
 20795 \let\geqq\textgeqq
 20796 \let\ngeqq\textngeqq
 20797 \let\lneqq\textlneqq
 20798 \let\gneqq\textgneqq
 20799 \let\ll\textll
 20800 \let\nll\textnll
 20801 \let\gg\textgg
 20802 \let\ngg\textngg
 20803 \let\between\textbetween
 20804 \let\nless\textnless
 20805 \let\ngtr\textngtr
 20806 \let\nleq\textnleq
 20807 \let\ngel\textngel
 20808 \let\lessim\textlessim
 20809 \let\gtrsim\textgtrsim
 20810 \let\nlessim\textnlessim
 20811 \let\ngtrsim\textngtrsim
 20812 \let\lessgtr\textlessgtr
 20813 \let\gtrless\textgtrless
 20814 \let\ngtrless\textngtrless
 20815 \let\nlessgtr\textnlessgtr
 20816 \let\prec\textprec
 20817 \let\succ\textsucc
 20818 \let\preccurlyeq\textpreccurlyeq
 20819 \let\succcurlyeq\textsucccurlyeq
 20820 \let\prec\textprec
 20821 \let\prec\textprec
 20822 \let\succsim\textsuccsim
 20823 \let\nsuccsim\textnsuccsim
 20824 \let\prec\textprec
 20825 \let\succ\textsucc
 20826 \let\subset\textsubset
 20827 \let\supset\textsupset
 20828 \let\nsubset\textnsubset
 20829 \let\nsupset\textnsupset
 20830 \let\subseteq\textsubseteq
 20831 \let\supseteq\textsupseteq
 20832 \let\nsubseteq\textnsubseteq
 20833 \let\nsupseteq\textnsupseteq
 20834 \let\subsetneq\textsubsetneq
 20835 \let\supsetneq\textsupsetneq
 20836 \let\cupdot\textcupdot
 20837 \let\cupplus\textcupplus
 20838 \let\sqsubset\textsqsubset
 20839 \let\nsqsubset\textnsqsubset
 20840 \let\sqsupset\textsqsupset
 20841 \let\nsqsupset\textnsqsupset
 20842 \let\sqsubseteq\textsqsubseteq
 20843 \let\nsqsubseteq\textnsqsubseteq
 20844 \let\sqsupseteq\textsqsupseteq
 20845 \let\nsqsupseteq\textnsqsupseteq
 20846 \let\sqcap\textsqcap
 20847 \let\sqcup\textsqcup

20848 $\backslash\text{let}\backslash\text{oplus}\backslash\text{textoplus}$
 20849 $\backslash\text{let}\backslash\text{ominus}\backslash\text{textominus}$
 20850 $\backslash\text{let}\backslash\text{otimes}\backslash\text{textotimes}$
 20851 $\backslash\text{let}\backslash\text{oslash}\backslash\text{textoslash}$
 20852 $\backslash\text{let}\backslash\text{odot}\backslash\text{textodot}$
 20853 $\backslash\text{let}\backslash\text{circledcirc}\backslash\text{textcircledcirc}$
 20854 $\backslash\text{let}\backslash\text{circledast}\backslash\text{textcircledast}$
 20855 $\backslash\text{let}\backslash\text{circleddash}\backslash\text{textcircleddash}$
 20856 $\backslash\text{let}\backslash\text{boxplus}\backslash\text{textboxplus}$
 20857 $\backslash\text{let}\backslash\text{boxminus}\backslash\text{textboxminus}$
 20858 $\backslash\text{let}\backslash\text{boxtimes}\backslash\text{textboxtimes}$
 20859 $\backslash\text{let}\backslash\text{boxdot}\backslash\text{textboxdot}$
 20860 $\backslash\text{let}\backslash\text{vdash}\backslash\text{textvdash}$
 20861 $\backslash\text{let}\backslash\text{dashv}\backslash\text{texdashv}$
 20862 $\backslash\text{let}\backslash\text{ndashv}\backslash\text{texndashv}$
 20863 $\backslash\text{let}\backslash\text{top}\backslash\text{texttop}$
 20864 $\backslash\text{let}\backslash\text{ndownvdash}\backslash\text{texndownvdash}$
 20865 $\backslash\text{let}\backslash\text{bot}\backslash\text{textbot}$
 20866 $\backslash\text{let}\backslash\text{nupvdash}\backslash\text{texnupvdash}$
 20867 $\backslash\text{let}\backslash\text{vDash}\backslash\text{textvDash}$
 20868 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 20869 $\backslash\text{let}\backslash\text{Vvdash}\backslash\text{textVvdash}$
 20870 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{texnVdash}$
 20871 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 20872 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{texnvDash}$
 20873 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{texnvDash}$
 20874 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{texnVdash}$
 20875 $\backslash\text{let}\backslash\text{nVDash}\backslash\text{texnVDash}$
 20876 $\backslash\text{let}\backslash\text{lhs}\backslash\text{texlhs}$
 20877 $\backslash\text{let}\backslash\text{rhs}\backslash\text{texrhs}$
 20878 $\backslash\text{let}\backslash\text{unlhs}\backslash\text{texunlhs}$
 20879 $\backslash\text{let}\backslash\text{unrhs}\backslash\text{texunrhs}$
 20880 $\backslash\text{let}\backslash\text{multimapdotbothA}\backslash\text{textmultimapdotbothA}$
 20881 $\backslash\text{let}\backslash\text{multimapdotbothB}\backslash\text{textmultimapdotbothB}$
 20882 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 20883 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 20884 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 20885 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 20886 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 20887 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 20888 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{texltimes}$
 20889 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{texrtimes}$
 20890 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 20891 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$
 20892 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 20893 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{texnbacksimeq}$
 20894 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$
 20895 $\backslash\text{let}\backslash\text{curlywedge}\backslash\text{textcurlywedge}$
 20896 $\backslash\text{let}\backslash\text{Subset}\backslash\text{textSubset}$
 20897 $\backslash\text{let}\backslash\text{nSubset}\backslash\text{texnSubset}$
 20898 $\backslash\text{let}\backslash\text{Supset}\backslash\text{textSupset}$
 20899 $\backslash\text{let}\backslash\text{nSupset}\backslash\text{texnSupset}$
 20900 $\backslash\text{let}\backslash\text{Cap}\backslash\text{textCap}$
 20901 $\backslash\text{let}\backslash\text{Cup}\backslash\text{textCup}$

20902 \let\pitchfork\textpitchfork
 20903 \let\lessdot\textlessdot
 20904 \let\gtrdot\textgtrdot
 20905 \let\lll\textlll
 20906 \let\ggg\textggg
 20907 \let\lesseqgtr\textlesseqgtr
 20908 \let\gtreqless\textgtreqless
 20909 \let\curlyeqprec\textcurlyeqprec
 20910 \let\ncurlyeqprec\textncurlyeqprec
 20911 \let\curlyeqsucc\textcurlyeqsucc
 20912 \let\ncurlyeqsucc\textncurlyeqsucc
 20913 \let\preccurlyeq\textpreccurlyeq
 20914 \let\nsucccurlyeq\textnsucccurlyeq
 20915 \let\sqsubseteq\textsqsubseteq
 20916 \let\sqsupseteq\textsqsupseteq
 20917 \let\sqsubsetneq\textsqsubsetneq
 20918 \let\sqsupsetneq\textsqsupsetneq
 20919 \let\lnsim\textlnsim
 20920 \let\gnsim\textgnsim
 20921 \let\precnsim\textprecnsim
 20922 \let\succnsim\textsuccnsim
 20923 \let\triangleleft\texttriangleleft
 20924 \let\triangleright\texttriangleright
 20925 \let\trianglelefteq\texttrianglelefteq
 20926 \let\trianglerighteq\texttrianglerighteq
 20927 \let\vdots\textvdots
 20928 \let\cdots\textcdots
 20929 \let\udots\textudots
 20930 \let\ddots\textddots
 20931 \let\barin\textbarin
 20932 \let\diameter\textdiameter
 20933 \let\backneg\textbackneg
 20934 \let\wasylounge\textwasylounge
 20935 \let\invbackneg\textinvbackneg
 20936 \let\clock\textclock
 20937 \let\ulcorner\textulcorner
 20938 \let\urcorner\texturcorner
 20939 \let\llcorner\textllcorner
 20940 \let\lrcorner\textlrcorner
 20941 \let\frown\textfrown
 20942 \let\smile\textsmile
 20943 \let\Keyboard\textKeyboard
 20944 \let\langle\textlangle
 20945 \let\rangle\textrangle
 20946 \let\APLinv\textAPLinv
 20947 \let\Tumbler\textTumbler
 20948 \let\notslash\textnotslash
 20949 \let\notbackslash\textnotbackslash
 20950 \let\boxbackslash\textboxbackslash
 20951 \let\APLleftarrowbox\textAPLleftarrowbox
 20952 \let\APLrightarrowbox\textAPLrightarrowbox
 20953 \let\APLuparrowbox\textAPLuparrowbox
 20954 \let\APLdownarrowbox\textAPLdownarrowbox
 20955 \let\APLinput\textAPLinput

20956 \let\Request\textRequest
 20957 \let\Beam\textBeam
 20958 \let\hexagon\texthexagon
 20959 \let\APLbox\textAPLbox
 20960 \let\ForwardToIndex\textForwardToIndex
 20961 \let\RewindToIndex\textRewindToIndex
 20962 \let\bbslash\textbbslash
 20963 \let\CircledA\textCircledA
 20964 \let\CleaningF\textCleaningF
 20965 \let\CleaningFF\textCleaningFF
 20966 \let\CleaningP\textCleaningP
 20967 \let\CleaningPP\textCleaningPP
 20968 \let\CuttingLine\textCuttingLine
 20969 \let\UParrow\textUParrow
 20970 \let\bigtriangleup\textbigtriangleup
 20971 \let\Forward\textForward
 20972 \let\triangleright\texttriangleright
 20973 \let\RHD\textRHD
 20974 \let\DOWNarrow\textDOWNarrow
 20975 \let\bigtriangledown\textbigtriangledown
 20976 \let\Rewind\textRewind
 20977 \let\triangleleft\texttriangleleft
 20978 \let\LHD\textLHD
 20979 \let\diamond\textdiamond
 20980 \let\lozenge\textlozenge
 20981 \let\LEFTCIRCLE\textLEFTCIRCLE
 20982 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20983 \let\openbullet\textopenbullet
 20984 \let\boxbar\textboxbar
 20985 \let\bigcircle\textbigcircle
 20986 \let\Cloud\textCloud
 20987 \let\FiveStar\textFiveStar
 20988 \let\FiveStarOpen\textFiveStarOpen
 20989 \let\Phone\textPhone
 20990 \let\boxempty\textboxempty
 20991 \let\Checkedbox\textCheckedbox
 20992 \let\Crossedbox\textCrossedbox
 20993 \let\Coffeecup\textCoffeecup
 20994 \let\HandCuffLeft\textHandCuffLeft
 20995 \let\HandCuffRight\textHandCuffRight
 20996 \let\HandLeft\textHandLeft
 20997 \let\HandRight\textHandRight
 20998 \let\Radioactivity\textRadioactivity
 20999 \let\Biohazard\textBiohazard
 21000 \let\Ankh\textAnkh
 21001 \let\YinYang\textYinYang
 21002 \let\frownie\textfrownie
 21003 \let\smiley\textsmiley
 21004 \let\blacksmiley\textblacksmiley
 21005 \let\sun\textsun
 21006 \let\leftmoon\textleftmoon
 21007 \let\rightmoon\textrightmoon
 21008 \let\mercury\textmercury
 21009 \let\earth\textearth

21010 \let\male\textmale
 21011 \let\jupiter\textjupiter
 21012 \let\saturn\textsaturn
 21013 \let\uranus\texturanus
 21014 \let\neptune\textneptune
 21015 \let\pluto\textpluto
 21016 \let\aries\textaries
 21017 \let\taurus\texttaurus
 21018 \let\gemini\textgemini
 21019 \let\cancer\textcancer
 21020 \let\leo\textleo
 21021 \let\virgo\textvirgo
 21022 \let\libra\textlibra
 21023 \let\scorpio\textscorpio
 21024 \let\sagittarius\textsagittarius
 21025 \let\capricornus\textcapricornus
 21026 \let\aquarius\textaquarius
 21027 \let\pisces\textpisces
 21028 \let\quarternote\textquarternote
 21029 \let\twonotes\texttwonotes
 21030 \let\sixteenthnote\textsixteenthnote
 21031 \let\flat\textflat
 21032 \let\natural\textnatural
 21033 \let\sharp\textsharp
 21034 \let\recycle\textrecycle
 21035 \let\Wheelchair\textWheelchair
 21036 \let\Flag\textFlag
 21037 \let\MineSign\textMineSign
 21038 \let\ds\textds
 21039 \let\dsmedical\textdsmedical
 21040 \let\dsjuridical\textdsjuridical
 21041 \let\dschemical\textdschemical
 21042 \let\dsbiological\textdsbiological
 21043 \let\dscommercial\textdscommercial
 21044 \let\manstar\textmanstar
 21045 \let\danger\textdanger
 21046 \let\FemaleFemale\textFemaleFemale
 21047 \let\MaleMale\textMaleMale
 21048 \let\FemaleMale\textFemaleMale
 21049 \let\Hermaphrodite\textHermaphrodite
 21050 \let\Neutral\textNeutral
 21051 \let\hexstar\texthexstar
 21052 \let\SunCloud\textSunCloud
 21053 \let\Rain\textRain
 21054 \let\noway\textnoway
 21055 \let\Mountain\textMountain
 21056 \let\Tent\textTent
 21057 \let\ScissorRight\textScissorRight
 21058 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21059 \let\ScissorHollowRight\textScissorHollowRight
 21060 \let\PhoneHandset\textPhoneHandset
 21061 \let\Tape\textTape
 21062 \let\Plane\textPlane
 21063 \let\Envelope\textEnvelope

21064 \let\Peace\textPeace
 21065 \let\WritingHand\textWritingHand
 21066 \let\PencilRightDown\textPencilRightDown
 21067 \let\PencilRight\textPencilRight
 21068 \let\PencilRightUp\textPencilRightUp
 21069 \let\NibRight\textNibRight
 21070 \let\NibSolidRight\textNibSolidRight
 21071 \let\Checkmark\textCheckmark
 21072 \let\CheckmarkBold\textCheckmarkBold
 21073 \let\XSolid\textXSolid
 21074 \let\XSolidBold\textXSolidBold
 21075 \let\XSolidBrush\textXSolidBrush
 21076 \let\PlusOutline\textPlusOutline
 21077 \let\Plus\textPlus
 21078 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21079 \let\PlusCenterOpen\textPlusCenterOpen
 21080 \let\Cross\textCross
 21081 \let\CrossOpenShadow\textCrossOpenShadow
 21082 \let\CrossOutline\textCrossOutline
 21083 \let\CrossMaltese\textCrossMaltese
 21084 \let\DavidStar\textDavidStar
 21085 \let\FourAsterisk\textFourAsterisk
 21086 \let\JackStar\textJackStar
 21087 \let\JackStarBold\textJackStarBold
 21088 \let\ClowerTips\textClowerTips
 21089 \let\FourStar\textFourStar
 21090 \let\FourStarOpen\textFourStarOpen
 21091 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21092 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21093 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21094 \let\FiveStarOutline\textFiveStarOutline
 21095 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21096 \let\FiveStarConvex\textFiveStarConvex
 21097 \let\FiveStarShadow\textFiveStarShadow
 21098 \let\AsteriskBold\textAsteriskBold
 21099 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21100 \let\EightStarTaper\textEightStarTaper
 21101 \let\EightStarConvex\textEightStarConvex
 21102 \let\SixStar\textSixStar
 21103 \let\EightStar\textEightStar
 21104 \let\EightStarBold\textEightStarBold
 21105 \let\TwelveStar\textTwelveStar
 21106 \let\SixteenStarLight\textSixteenStarLight
 21107 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21108 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21109 \let\Asterisk\textAsterisk
 21110 \let\SixFlowerAlternate\textSixFlowerAlternate
 21111 \let\FiveFlowerPetal\textFiveFlowerPetal
 21112 \let\FiveFlowerOpen\textFiveFlowerOpen
 21113 \let\EightFlowerPetal\textEightFlowerPetal
 21114 \let\SunshineOpenCircled\textSunshineOpenCircled
 21115 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21116 \let\SnowflakeChevron\textSnowflakeChevron
 21117 \let\Snowflake\textSnowflake

21118 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21119 \let\Sparkle\textSparkle
 21120 \let\SparkleBold\textSparkleBold
 21121 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21122 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21123 \let\EightAsterisk\textEightAsterisk
 21124 \let\CircleShadow\textCircleShadow
 21125 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21126 \let\SquareTopRight\textSquareTopRight
 21127 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21128 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21129 \let\DiamandSolid\textDiamandSolid
 21130 \let\RectangleThin\textRectangleThin
 21131 \let\Rectangle\textRectangle
 21132 \let\RectangleBold\textRectangleBold
 21133 \let\perp\textperp
 21134 \let\notperp\textnotperp
 21135 \let\veedot\textveedot
 21136 \let\wedgedot\textwedgedot
 21137 \let\leftspoon\textleftspoon
 21138 \let\lbrackdbl\textlbrackdbl
 21139 \let\rbrackdbl\textrbrackdbl
 21140 \let\circlearrowleft\textcirclearrowleft
 21141 \let\circlearrowright\textcirclearrowright
 21142 \let\longleftarrow\textlongleftarrow
 21143 \let\longrightarrow\textlongrightarrow
 21144 \let\longleftarrow\textlongleftarrow
 21145 \let\Longleftarrow\textLongleftarrow
 21146 \let\Longrightarrow\textLongrightarrow
 21147 \let\Longleftarrow\textLongleftarrow
 21148 \let\longmapsto\textlongmapsto
 21149 \let\Longmapsfrom\textLongmapsfrom
 21150 \let\Longmapsto\textLongmapsto
 21151 \let\nwsearrow\textnwsearrow
 21152 \let\neswarrow\textneswarrow
 21153 \let\hooknearrow\texthooknearrow
 21154 \let\rhooknearrow\texthooknearrow
 21155 \let\hooksearrow\texthooksearrow
 21156 \let\rhookswarrow\texthookswarrow
 21157 \let\leadsto\textleadsto
 21158 \let\rcurvearrowne\textrcurvearrowne
 21159 \let\lcurvearrowse\textlcurvearrowse
 21160 \let\lcurvearrowsw\textlcurvearrowsw
 21161 \let\rcurvearrowse\textrcurvearrowse
 21162 \let\lcurvearrowdown\textlcurvearrowdown
 21163 \let\rcurvearrowdown\textrcurvearrowdown
 21164 \let\rcurvearrowleft\textrcurvearrowleft
 21165 \let\rcurvearrowright\textrcurvearrowright
 21166 \let\leftrightharpoon\textleftrightharpoon
 21167 \let\rightleftharpoon\textrightleftharpoon
 21168 \let\updownharpoonrightleft\textupdownharpoonrightleft
 21169 \let\updownharpoonleftright\textupdownharpoonleftright
 21170 \let\leftleftharpoons\textleftleftharpoons
 21171 \let\upupharpoons\textupupharpoons

21172 $\backslash\mathrm{rightrightarpoons}\backslash\mathrm{textrightrightarpoons}$
 21173 $\backslash\mathrm{downdownarpoons}\backslash\mathrm{textdowndownarpoons}$
 21174 $\backslash\mathrm{leftbarharpoon}\backslash\mathrm{textleftbarharpoon}$
 21175 $\backslash\mathrm{barleftharpoon}\backslash\mathrm{textbarleftharpoon}$
 21176 $\backslash\mathrm{rightbarharpoon}\backslash\mathrm{textrightbarharpoon}$
 21177 $\backslash\mathrm{barrightharpoon}\backslash\mathrm{textbarrightharpoon}$
 21178 $\backslash\mathrm{updownarpoons}\backslash\mathrm{textupdownarpoons}$
 21179 $\backslash\mathrm{downuparpoons}\backslash\mathrm{textdownuparpoons}$
 21180 $\backslash\mathrm{moo}\backslash\mathrm{textmoo}$
 21181 $\backslash\mathrm{llparenthesis}\backslash\mathrm{textllparenthesis}$
 21182 $\backslash\mathrm{rrparenthesis}\backslash\mathrm{textrrparenthesis}$
 21183 $\backslash\mathrm{invdiameter}\backslash\mathrm{textinvdiameter}$
 21184 $\backslash\mathrm{oobar}\backslash\mathrm{textobar}$
 21185 $\backslash\mathrm{obslash}\backslash\mathrm{textobslash}$
 21186 $\backslash\mathrm{obot}\backslash\mathrm{textobot}$
 21187 $\backslash\mathrm{NoChemicalCleaning}\backslash\mathrm{textNoChemicalCleaning}$
 21188 $\backslash\mathrm{olessthan}\backslash\mathrm{textolessthan}$
 21189 $\backslash\mathrm{ogreaterthan}\backslash\mathrm{textogreaterthan}$
 21190 $\backslash\mathrm{boxslash}\backslash\mathrm{textboxslash}$
 21191 $\backslash\mathrm{boxbslash}\backslash\mathrm{textboxbslash}$
 21192 $\backslash\mathrm{boxast}\backslash\mathrm{textboxast}$
 21193 $\backslash\mathrm{boxcircle}\backslash\mathrm{textboxcircle}$
 21194 $\backslash\mathrm{boxbox}\backslash\mathrm{textboxbox}$
 21195 $\backslash\mathrm{Valve}\backslash\mathrm{textValve}$
 21196 $\backslash\mathrm{multimapboth}\backslash\mathrm{textmultimapboth}$
 21197 $\backslash\mathrm{shuffle}\backslash\mathrm{textshuffle}$
 21198 $\backslash\mathrm{uplus}\backslash\mathrm{textuplus}$
 21199 $\backslash\mathrm{bigdoublewedge}\backslash\mathrm{textbigdoublewedge}$
 21200 $\backslash\mathrm{bigdoublevee}\backslash\mathrm{textbigdoublevee}$
 21201 $\backslash\mathrm{Join}\backslash\mathrm{textJoin}$
 21202 $\backslash\mathrm{fatsemi}\backslash\mathrm{textfatsemi}$
 21203 $\backslash\mathrm{circplus}\backslash\mathrm{textcircplus}$
 21204 $\backslash\mathrm{minusdot}\backslash\mathrm{textminusdot}$
 21205 $\backslash\mathrm{dottimes}\backslash\mathrm{textdottimes}$
 21206 $\backslash\mathrm{dtimes}\backslash\mathrm{textdtimes}$
 21207 $\backslash\mathrm{odiv}\backslash\mathrm{textodiv}$
 21208 $\backslash\mathrm{invneg}\backslash\mathrm{textinvneg}$
 21209 $\backslash\mathrm{sqdoublecap}\backslash\mathrm{textsquaddoublecap}$
 21210 $\backslash\mathrm{capdot}\backslash\mathrm{textcapdot}$
 21211 $\backslash\mathrm{sqdoublecup}\backslash\mathrm{textsquaddoublecup}$
 21212 $\backslash\mathrm{doublewedge}\backslash\mathrm{textdoublewedge}$
 21213 $\backslash\mathrm{doublevee}\backslash\mathrm{textdoublevee}$
 21214 $\backslash\mathrm{doublebarwedge}\backslash\mathrm{textdoublebarwedge}$
 21215 $\backslash\mathrm{veedoublebar}\backslash\mathrm{textveedoublebar}$
 21216 $\backslash\mathrm{eqdot}\backslash\mathrm{texteqdot}$
 21217 $\backslash\mathrm{neqdot}\backslash\mathrm{textneqdot}$
 21218 $\backslash\mathrm{coloncolonequals}\backslash\mathrm{textcoloncolonequals}$
 21219 $\backslash\mathrm{leqslant}\backslash\mathrm{textleqslant}$
 21220 $\backslash\mathrm{nleqslant}\backslash\mathrm{textnleqslant}$
 21221 $\backslash\mathrm{geqslant}\backslash\mathrm{textgeqslant}$
 21222 $\backslash\mathrm{ngeqslant}\backslash\mathrm{textngeqslant}$
 21223 $\backslash\mathrm{lessapprox}\backslash\mathrm{textlessapprox}$
 21224 $\backslash\mathrm{nlessapprox}\backslash\mathrm{textnlessapprox}$
 21225 $\backslash\mathrm{gtrapprox}\backslash\mathrm{textgtrapprox}$

21226 `\let\ngtrapprox\textngtrapprox`
 21227 `\let\lneq\textlneq`
 21228 `\let\gneq\textgneq`
 21229 `\let\lnapprox\textlnapprox`
 21230 `\let\gnapprox\textgnapprox`
 21231 `\let\lesseqqgtr\textlesseqqgtr`
 21232 `\let\gtreqqless\textgtreqqless`
 21233 `\let\eqslantless\texteqslantless`
 21234 `\let\eqslantgtr\texteqslantgtr`
 21235 `\let\leftslice\textleftslice`
 21236 `\let\rightslice\textright slice`
 21237 `\let\preceq\textpreceq`
 21238 `\let\preceq\textpreceq`
 21239 `\let\succeq\textsucceq`
 21240 `\let\nsucceq\textnsucceq`
 21241 `\let\precneq\textprecneq`
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 21250 `\let\precapprox\textprecapprox`
 21251 `\let\succapprox\textsuccapprox`
 21252 `\let\nsuccapprox\textnsuccapprox`
 21253 `\let\precnapprox\textprecnapprox`
 21254 `\let\succnapprox\textsuccnapprox`
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 21258 `\let\supseteqq\textsupseteqq`
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 21260 `\let\ndashV\textndashV`
 21261 `\let\Dashv\textDashv`
 21262 `\let\ndashv\textndashv`
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 21264 `\let\ndashV\textndashV`
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 21301 \let\Info\textInfo
 21302 \let\CESign\textCESign
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 21306 \let\pm\textpm
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 21311 \let\fcdice\HyPsd@DieFace
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 21314 \let\EyesDollar\textdollar
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 21316 \let\with\textampersand
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 21332 \let\bard\textcrd
 21333 \let\textcrh\texthbar

21334 \let\crossh\texthbar
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 21337 \let\engma\ng
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 21341 \let\Florin\textflorin
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 21343 \let\hausak\texthtk
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 21409 \let\ubar\textbaru
 21410 \let\rotOmega\textniupsilon
 21411 \let\invv\textturnv
 21412 \let\pwedge\textturnv
 21413 \let\invw\textturnw
 21414 \let\rotrw\textturnw
 21415 \let\invy\textturny
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 21424 \let\textstretchcvar\textstretchc
 21425 \let\clickb\textbullseye
 21426 \let\textObullseye\textbullseye
 21427 \let\textctjvar\textctj
 21428 \let\textturnsck\textturnk
 21429 \let\dz\textdzlig
 21430 \let\tesh\texttshlig
 21431 \let\digamma\textdigammagreek
 21432 \let\hardsign\cyrhrdsn
 21433 \let\softsign\cyrsoftsn
 21434 \let\hebsin\hebshin
 21435 \let\textsck\textPUscck
 21436 \let\textscm\textPUscm
 21437 \let\textscp\textPUscp
 21438 \let\textrevscr\textPUrevscr
 21439 \let\textrhooca\textPURhooka
 21440 \let\textrhooke\textPURhooke
 21441 \let\textrhookepsilon\textPURhookepsilon

21442 \let\textrhoookopeno\textPurhookopeno
 21443 \let\textdoublevertline\textbardbl
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 21445 \let\ddagger\textdaggerdbl
 21446 \let\ddag\textdaggerdbl
 21447 \let\mathellipsis\textellipsis
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 21478 \let\Anglesign\textsphericalangle
 21479 \let\AngleSign\textsphericalangle
 21480 \let\notdivides\textnmid
 21481 \let\varowedge\textowedge
 21482 \let\varovee\textovee
 21483 \let\varint\textint
 21484 \let\varoint\textoint
 21485 \let\downtherefore\textbecause
 21486 \let\textdotdiv\textdotminus
 21487 \let\AC\textsim
 21488 \let\wreath\textwr
 21489 \let\nthickapprox\textnapprox
 21490 \let\VHF\texttriplesim
 21491 \let\notasymp\textnasympt
 21492 \let\Doteq\textdoteqdot
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 21494 \let\Corresponds\texthateq
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 21498 \let\notequiv\textnequiv
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 21502 \let\apprge\textgt sim
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 21504 \let\varominus\textminus
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 21506 \let\varoslash\textoslash
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 21510 \let\varoast\textcircledast
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 21512 \let\rightvdash\textvdash
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 21537 \let\doublecup\textCup
 21538 \let\varsubsetneq\textsqsubsetneq
 21539 \let\varsupsetneq\textsqsupsetneq
 21540 \let\lessclosed\textntriangleleft
 21541 \let\ngtrclosed\textntriangleright
 21542 \let\Clocklogo\textclock
 21543 \let\ClockLogo\textclock
 21544 \let\baro\textstmaryrdbaro
 21545 \let\varparallel\textbbslash
 21546 \let\CleaningA\textCircledA
 21547 \let\Kutline\textCuttingLine
 21548 \let\CutLine\textCuttingLine
 21549 \let\Cutline\textCuttingLine

21550 \let\MoveUp\textUParrow
 21551 \let\APLup\textbigtriangleup
 21552 \let\Bleech\textbigtriangleup
 21553 \let\MoveDown\textDOWNarrow
 21554 \let\APLdown\textbigtriangledown
 21555 \let\Diamond\textdiamond
 21556 \let\varbigcirc\textbigcircle
 21557 \let\Telefon\textPhone
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 21564 \let\PointingHand\textHandRight
 21565 \let\Pointinghand\textHandRight
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 21598 \let\Aquarius\textaquarius
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 21601 \let\Heart\textheartsuitwhite
 21602 \let\heartsuit\textheartsuitwhite
 21603 \let\diamondsuit\textdiamondsuitwhite

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21605 \let\eighthnote\textmusicalnote
21606 \let\Recycling\textrecycle
21607 \let\VarFlag\textFlag
21608 \let\textxswup\textdsmlilitary
21609 \let\textuncrfemale\textPUuncrfemale
21610 \let\Football\textSoccerBall
21611 \let\CutLeft\textScissorRightBrokenBottom
21612 \let\Cutright\textScissorRightBrokenBottom
21613 \let\RightScissors\textScissorRight
21614 \let\Leftscissors\textScissorRight
21615 \let\Letter\textEnvelope
21616 \let\Writinghand\textWritingHand
21617 \let\checkmark\textCheckmark
21618 \let\DavidStar\textDavidStar
21619 \let\llbracket\textlbrackdbl
21620 \let\rrbracket\textrrackdbl
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21622 \let\Righttorque\textlcurvearrowdown
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21649 \let\Womanface\textWomanFace
21650 \let\Faxmachine\textFax
21651 \let\CEsign\textCESign
21652 }% \psdaliasnames
21653 </psdextra>

```

52 End of file hyccheck.tex

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21655 \typeout{}
21656 \begin{document}
21657 \end{document}
21658 \check
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