

Hypertext marks in L^AT_EX

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

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1 Documentation overview for hyperref

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

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

[ChangeLog](#) This file records the version history.

[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 hyccheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{\%
19  \typeout{\}%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}\%
23    \ifx\HyC@date\@empty\relax\else\HyC@date\fi\%
24  }\%
25  \x
26  \typeout{\}%
27  \typeout{\%
28    * Package `HyC@package'\%
29    \ifx\HyC@date\@empty
30    \else
31    \space\HyC@date
```



```

32 \fi
33 }%
34 \@ifundefined{ver@\HyC@package.sty}{%
35 }{%
36 \typeout{%
37 \space\space Loaded: `\'HyC@package' %
38 \csname ver@\HyC@package.sty\endcsname
39 }%
40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```

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

```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={{#1}}%

```

```

107 \edef\HyC@optcmd{%
108   \expandafter\noexpand
109   \csname\expandafter\string\HyC@@cmd\endcsname
110 }%
111 \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112 \HyC@nc@noopt
113 }

```

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

```

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

```

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

`\HyC@edef`

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

138 \def\HyC@checkItem#1{%
139   \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
140   \else
141     \expandafter\expandafter\expandafter\ifx
142     \csname HyC@#1\expandafter\endcsname
143     \csname HyC@org@#1\endcsname
144     \expandafter\HyC@checkOk\csname HyC@#1\endcsname

```

```

145 \else
146 \expandafter\HyC@checkFailed
147 \csname HyC@#1\expandafter\endcsname
148 \csname HyC@org@#1\endcsname
149 \fi
150 \fi
151 }

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

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

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

```

177 }%
178 \x
179 \@makeother\`
180 \@makeother\=

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\^%
212   \x\_ %
213   \x\| %
214   \x\: %
215   \x\( %
216   \x\) %
217   \x\[ %
218   \x\] %
219   \x\/ %
220   \x\! %
221   \x\< %
222   \x\> %

```

```

223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```

231 \Hy@SetCatcodes

```

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 \LaTeX 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@stoppeearly
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@pdffitwindow
377 \newif\ifHy@frenchlinks
378 \newif\ifHy@hyperfootnotes
379 \newif\ifHy@hyperindex
380 \newif\ifHy@hypertextnames
381 \newif\ifHy@implicit
382 \newif\ifHy@linktocpage
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@implicittrue

```

```

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

```
465 \def\Hy@safe@activestru{\csname @safe@activestru\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 (T_EX):

```
\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 <i>ddd</i>
- Strings are stored either in PDFDocEncoding, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a 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 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> 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\textP\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 \TeX logo does not work while writing to a file, the standard \TeX 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}{\fi}%

```

```

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 `\pdfstringdef-PreHook`.

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

```
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 L^AT_EX as follows:

```

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

```

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

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

```

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 'xargs':

```

675 \let\@protected@testopt@xargs\HyPsd@protected@testopt

```

6.2.2 Expansion

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

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

\csname: First the string is expanded within a \csname and \endcsname. Then the command name is converted to characters with catcode 12 by \string and the first escape character removed by \@gobble. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot 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 `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

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

```

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 no 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 an 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.ldf` 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\csname 80\040\endcsname
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 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\cename 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-greekbasic.def}{}%
899     \Hy@SaveCatcodeSettings{pu}%
900     \input{puenc-greekbasic.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 \TeX '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 !\@empty{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

```


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 L^AT_EX 2_ε versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (L^AT_EX 2_ε release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@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 caught by undelimited arguments.
- And they work in number, dimen, 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 \yPsd@@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 \HyPsd@ITALCORR and the checking process. Command names are filtered out, so we need another \HyPsd@GLYPHERR 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 cause TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

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

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

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

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

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

`\HyPsd@DefCommand`

`\HyPsd@LetCommand`

```

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@testopt@ifnextchar

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

```
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   }
```

```

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

```

#1   Exact the tokens that should be replaced.
#2   The replacement (don't need to be expanded).
#3   Command with the string.
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 $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'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` T_EX 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 \@@backslashchar 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 \@@backslashchar
1942 \IntCalcDiv#1!64!%
1943 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1944 \IntCalcMod#1!8!%
1945 }%
1946 \def\HyPsd@CharSurrogate#1!{%
1947 \@@backslashchar 33%
1948 \IntCalcDiv#1!262144!%
1949 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1950 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1951 \@@backslashchar 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 \@@backslashchar 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@ccxliv@undef
1974 \let~\HyPsd@UTFviii@ccxliv@def
1975 \fi
1976 \let\unichar\HyPsd@unichar
1977 }%
1978 }%
1979 \def\HyPsd@UTFviii@ccxliv@undef{\@inpencc@undefined@{utf8}}%
1980 \edef\HyPsd@UTFviii@ccxliv@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.

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

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

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

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

$$(5)$$

```

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\dimexpr #1-48\expandafter\relax
1993 \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
1994 \number\dimexpr #3-8*%
1995 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1996 \number\dimexpr #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\dimexpr`#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\dimexpr #1-56\expandafter\relax
2011 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2012 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2013 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2014 \number\dimexpr #6-16\expandafter\relax
2015 \number\dimexpr #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\dimexpr
2019 \dimexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2020 \expandafter|\dimexpr
2021 \dimexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2022 }%
2023 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2024 \933\dimexpr.25\dimexpr#1sp\relax\relax
2025 \csname\dimexpr#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>"7FF %
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\numexpr#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	<code>\Cube</code>
epsdice	<code>\epsdice</code>
hhcount	<code>\fcdice</code>

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

```

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=1 %
2336 \let\Hy@RestoreLastskip\relax
2337 \else
2338 \let\Hy@RestoreLastskip\nobreak
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@stoppearly@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 L^AT_EX 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 counters.

```
2591 \define@key{Hyp}{hypertextnames}[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@LoadStringEnc
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{vtexpdfmark}{%
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 `vtexpdfmark',\MessageBreak
2878       because of wrong OpMode (\the\OpMode)%
2879     }\@ehc
2880   \fi
2881 \else
2882   \Hy@Error{%
2883     Wrong driver option `vtexpdfmark',\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{\@latextohtmlX}%
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 `\autoref{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```
3136 % \def\equationautorefname{%
3137 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\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\cyr1.}%
3156 % \def\appendixautorefname{%
3157 % \cyr\cyrp\cyrr\cyri\cyr1\cyro\cyrzh\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{\DJ{ }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\textomega\textsigma\texteta}%
3230 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3231 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3232 \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3233 \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3234 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3235 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3236 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3237 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3238 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3239 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron\textupsilon\textpi\textomicron\textepsilon\textpi\textomicron\textepsilon\textpi\textomicron}%
3240 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3241 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3242 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3243 \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%
3244 \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\textalpha}%
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{alineaf}%
3259 \def\subparagraphautorefname{deelalineaf}%
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{français}{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 color specification are missing, then the value is processed as color specification from package `xcolor` by using `\XC@bordercolor` (since `xcolor` 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

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@unicodedefalse
3771 \pdfstringdef\@pdfcreationdate{#1}%
3772 \endgroup
3773 }
3774 \define@key{Hyp}{pdfmoddate}{%
3775 \begingroup
3776 \Hy@unicodedefalse
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\curname KV@pdfinfo@\HyInfo@Key\endcurname\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\curname HyInfo@Value@##1\endcurname
3871           \HyInfo@Value
3872         }%
3873       }%
3874       \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3875       \global\expandafter
3876       \let\curname KV@pdfinfo@\HyInfo@Key\expandafter\endcurname
3877       \curname KV@pdfinfo@\HyInfo@Key\endcurname
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         \edef\EscapeName\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 `pdfang', because it violates\MessageBreak
4113      well-formedness defined in RFC 4646\MessageBreak
4114      by duplicate singleton subtags%
4115      }%
4116      \let\@pdfang\relax
4117      }{%
4118      }%
4119      }{%

```

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

```

4120      \ifx\@pdfang\relax
4121      \else
4122      \Hy@Match\@pdfang{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 `pdfang' 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@stoppedearlytrue
4220   \expandafter\Hy@MaybeStopNow
4221 \fi
4222 \Hy@stoppedearlyfalse

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

```

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\@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{hxtex}%
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{hvtexhtm}%
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\cname 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 spec-
ification.
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   \Hy@Color@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@activetrue
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@activetrue
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@activetrue
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@activetrue
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\bgroup\Hy@href{\hyper@normalise\href@}%
4916 }
4917 \def\Hy@href#1{%
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/|<<.*[/S[ /.+>>|)%
4982         \[( ?\HyPat@ObjRef/|<<.*[/S[ /.+>>)+ ?)]$%
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 L^AT_EX 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 \let\protect\@unexpandableprotect
5019 \edef\Hy@tempa{%
5020 \endgroup
5021 \noexpand#1[{#2}]}%
5022 }%
5023 \Hy@tempa
5024 }
5025 \def\@hyperref{\hyper@normalise\@hyperref}
5026 \def\@hyperref#1#2#3{%
5027 \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
5028 \expandafter\tryhyper@link\ref@one\{#1}%
5029 }
5030 \def\tryhyper@link#1\#2{%
5031 \hyper@@link{#2}{#1}%
5032 }
5033 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5034 \def\@hyperdef#1#2#3{%, category, name, text
5035 \ifx\#1\%
5036 \def\Hy@AnchorName{#2}%
5037 \else
5038 \def\Hy@AnchorName{#1.#2}%
5039 \fi
5040 \ifHy@nesting
5041 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5042 \else
5043 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5044 \fi
5045 }

```

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.

```

5046 \let\hyperrefundefinedlink\@firstofone
5047 \def\label@hyperref[#1]{%
5048   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5049 }%
5050 \def\label@@hyperref#1#2#3{%
5051   \ifx#1\relax
5052     \protect\G@refundefinedtrue
5053     \@latex@warning{%
5054       Hyper reference `#2' on page \thepage \space undefined%
5055     }%
5056     \begingroup
5057       \hyperrefundefinedlink{#3}%
5058     \endgroup
5059   \else
5060     \hyper@@link{\expandafter\@fifthoffive#1}%
5061     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5062   \fi
5063 }
5064 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5065                               % anchor text
5066   \@bsphack
5067   \ifx\#2\%
5068     \def\Hy@AnchorName{#3}%
5069   \else
5070     \def\Hy@AnchorName{#2.#3}%
5071   \fi
5072   \if@filesw
5073     \protected@write\@auxout{}{%
5074       \string\newlabel{#1}{\{ }\}{\{ }\{\Hy@AnchorName\}\}}%
5075     }%
5076   \fi
5077   \@esphack
5078   \ifHy@nesting
5079     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5080   \else
5081     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5082   \fi
5083 }

```

16.1 Link box support for XeTeX

```

5084 \newdimen\XeTeXLinkMargin
5085 \setlength{\XeTeXLinkMargin}{2pt}
5086 \ifxetex
5087   \font\XeTeXLink@font=pzdr at 1sp\relax
5088   \newcommand*\XeTeXLink@space{%
5089     \begingroup
5090     \XeTeXLink@font

```

```

5091 \xxxii
5092 \endgroup
5093 }%
5094 \newcommand{\XeTeXLinkBox}[1]{%
5095 \begingroup
5096 \leavevmode
5097 \sbox\z@{\#1}%
5098 \begingroup
5099 \dimen@=\dp\z@
5100 \advance\dimen@\XeTeXLinkMargin
5101 \setbox\tw@=\llap{%
5102 \hb@xt@\XeTeXLinkMargin{%
5103 \lower\dimen@\hbox{\XeTeXLink@space}%
5104 \hss
5105 }%
5106 }%
5107 \dp\tw@=\dp\z@
5108 \ht\tw@=\ht\z@
5109 \copy\tw@
5110 \endgroup
5111 \copy\z@
5112 \dimen@=\ht\z@
5113 \advance\dimen@\XeTeXLinkMargin
5114 \setbox\tw@=\rlap{%
5115 \hb@xt@\XeTeXLinkMargin{%
5116 \hss
5117 \raise\dimen@\hbox{\XeTeXLink@space}%
5118 }%
5119 }%
5120 \dp\tw@=\dp\z@
5121 \ht\tw@=\ht\z@
5122 \copy\tw@
5123 \endgroup
5124 }%
5125 \else
5126 \newcommand*\XeTeXLinkBox}[1]{%
5127 \begingroup
5128 \leavevmode
5129 \sbox\z@{\#1}%
5130 \copy\z@
5131 \endgroup
5132 }%
5133 \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.

```

5134 \def\hyper@@link{\let\Hy@reserved@a\relax
5135 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
5136 }
5137 % #1: type
5138 % #2: URL
5139 % #3: destination name
5140 % #4: text
5141 \def\hyper@link@[#1]#2#3#4{%
5142 \ltx@ifempty{#4}{% link text
5143 \Hy@Warning{Suppressing empty link}%
5144 }{%
5145 \begingroup
5146 \protected@edef\Hy@tempa{#2}%
5147 \edef\Hy@tempb{#3}%
5148 \ifx\Hy@tempa\ltx@empty
5149 \ltx@Hy@tempb\ltx@empty
5150 \Hy@Warning{Suppressing link with empty target}%
5151 \toks@{%
5152 \endgroup
5153 \ltx@secondoftwo
5154 }%
5155 \else
5156 \toks@{%
5157 \endgroup
5158 \hyper@link{#1}%
5159 }%
5160 \fi
5161 \else
5162 \toks@{%
5163 \endgroup
5164 \expandafter\hyper@readexternallink#2\{#1}%
5165 }%
5166 \fi
5167 \Hy@safe@activesfalse
5168 \toks@\expandafter{%
5169 \the\expandafter\toks@
5170 \expandafter{\Hy@tempb}{#4}%
5171 }%
5172 \the\toks@
5173 }%
5174 }

```

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.

```

5175 \def\hyper@readexternallink#1\{#2#3#4{%

```

```

5176 \begingroup
5177 \let\\\relax
5178 \expandafter\endgroup
5179 \expandafter\@hyper@readexternallink#1\{\#2}\{\#3}\{\#4}%
5180 }
5181 \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.

```

5182 \@hyper@readexternallink{\#2}\{\#3}\{\#4}\#1::\{\#1}%
5183 }

```

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

```

5184 \def\@pdftempwordfile{file}%
5185 \def\@pdftempwordrun{run}%
5186 \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:

```

5187 \ifx\\\#6\\\%
5188 \@hyper@linkfile file:\#7\\\{\#3}\{\#2}\{\#7}%
5189 \else
5190 \ifx\\\#4\\\%
5191 \@hyper@linkfile file:\#7\\\{\#3}\{\#2}\{\#7}%
5192 \else

```

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

```

5193 \def\@pdftempa{\#4}%
5194 \ifx\@pdftempa\@pdftempwordfile
5195 \@hyper@linkfile\#7\\\{\#3}\{\#2}\{\#7}%
5196 \else

```

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

```

5197 \ifx\@pdftempa\@pdftempwordrun
5198 \ifHy@pdfa
5199 \Hy@Error{%
5200 PDF/A: Launch action is prohibited%
5201 }\@ehc

```

```

5202      \begingroup
5203      \leavevmode
5204      #2%
5205      \endgroup
5206      \else
5207      \@hyper@launch#7\{\#3\}\#2}%
5208      \fi
5209      \else

```

otherwise its a URL

```

5210      \hyper@linkurl{\#3\}\#7\ifx\#2\else\hyper@hash#2\fi}%
5211      \fi
5212      \fi
5213      \fi
5214      \fi
5215      }

```

By default, turn run: into file:

```

5216 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5217 \hyper@linkurl{\#2\}%
5218 \Hy@linkfileprefix
5219 #1%
5220 \ifx\#3\%
5221 \else
5222 \hyper@hash
5223 #3%
5224 \fi
5225 }%
5226 }

```

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

```

5227 \def\@hyper@linkfile file:#1\#2#3#4{%
5228 %file url,link string, name, original uri
5229 \filename@parse{\#1}%
5230 \ifx\filename@ext\relax
5231 \edef\filename@ext{\XR@ext}%
5232 \fi
5233 \def\use@file{\filename@area\filename@base.\filename@ext}%
5234 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5235 \hyper@linkfile{\#2\}\use@file\#3}%
5236 }{%
5237 \ifx\@baseurl\@empty
5238 \hyper@linkurl{\#2\}%
5239 #4\ifx\#3\else\hyper@hash#3\fi
5240 }%
5241 \else
5242 \hyper@linkurl{\#2\}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5243 \fi
5244 }%
5245 }

```



```

5246 \def\Hy@IfStringEndsWith#1#2{%
5247   \begingroup
5248   \edef\x{#1}%
5249   \@onelevel@sanitize\x
5250   \edef\x{.\x$}%
5251   \edef\y{#2}%
5252   \@onelevel@sanitize\y
5253   \edef\y{.\y$}%
5254   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5255     \endgroup
5256     \ifx\relax##2\relax
5257       \expandafter\ltx@secondoftwo
5258     \else
5259       \expandafter\ltx@firstoftwo
5260     \fi
5261   }%
5262   \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5263 }

5264 \def\Hy@StringLocalhost{localhost}
5265 \@onelevel@sanitize\Hy@StringLocalhost
5266 \def\Hy@CleanupFile#1{%
5267   \edef#1{#1}%
5268   \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5269 }
5270 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5271   \begingroup
5272   \toks@{\endgroup}%
5273   \def\x{#1}%
5274   \ifx\x\@empty
5275     \def\x{#2}%
5276   \ifx\x\@empty
5277     \toks@{\endgroup\def#5{/#3}}%
5278   \else
5279     \@onelevel@sanitize\x
5280     \ifx\x\Hy@StringLocalhost
5281       \toks@{\endgroup\def#5{/#3}}%
5282     \fi
5283   \fi
5284   \fi
5285   \the\toks@
5286 }

```

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.

```

5287 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5288 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5289   \ifx\\#1\\%
5290     #2\Hy@Warning{Ignoring empty anchor}%
5291   \else
5292     \def\anchor@spot{#2#3}%
5293     \let\put@me@back\@empty
5294     \ifx\relax#2\relax
5295     \else
5296       \ifHy@nesting
5297       \else
5298         \ifcat a\noexpand#2\relax
5299         \else
5300           \ifcat 0\noexpand#2 \relax
5301           \else
5302             \typeout{Anchor start is not alphanumeric %
5303               on input line\the\inputlineno%
5304             }%
5305             \let\anchor@spot\@empty
5306             \def\put@me@back{#2#3}%
5307           \fi
5308         \fi
5309       \fi
5310     \fi
5311     \ifHy@activeanchor
5312       \anchor@spot
5313     \else
5314       \hyper@anchor{#1}%
5315     \fi
5316     \expandafter\put@me@back
5317   \fi
5318   \let\anchor@spot\@empty
5319 }
5320 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5321 \ifHy@destlabel

\hyper@newdestlabel

5322 \def\hyper@newdestlabel#1#2{%
5323   \begingroup
5324     \Hy@safe@activetrue
5325     \edef\x{\endgroup
5326       \noexpand\@newl@bel{HyDL}{#1}{#2}%
5327     }%
5328   \x
5329 }%

```

\hyper@destlabel@hook

```
5330 \providecommand*\hyper@destlabel@hook{}\%
```

\Hy@DestRename

```
5331 \newcommand*\Hy@DestRename}[2]{%
5332 \ltx@ifundefined{HyDL!#1}{%
5333 \begingroup
5334 \Hy@safe@activetrue
5335 \edef\dest@name{#1}%
5336 \edef\label@name{#2}%
5337 \hyper@destlabel@hook
5338 \Hy@IsNotEmpty{dest@name}{%
5339 \Hy@IsNotEmpty{label@name}{%
5340 \global\expandafter
5341 \let\csname HyDL!#1\endcsname\ltx@empty
5342 \if@files
5343 \protected@write\@auxout{}\%
5344 \string\hyper@newdestlabel
5345 {#1}%
5346 {\label@name}%
5347 }%
5348 \fi
5349 }%
5350 }%
5351 \endgroup
5352 }{}%
5353 }%
```

\HyperDestRename

```
5354 \newcommand*\HyperDestRename}[2]{%
5355 \AtBeginDocument{%
5356 \Hy@DestRename{#1}{#2}%
5357 }%
5358 }%
5359 \AtBeginDocument{%
5360 \let\HyperDestRename\Hy@DestRename
5361 }%
```

\Hy@IsNotEmpty

```
5362 \def\Hy@IsNotEmpty#1{%
5363 \ltx@ifundefined{#1}\ltx@gobble{%
5364 \expandafter\ifx\csname#1\endcsname\ltx@empty
5365 \expandafter\ltx@gobble
5366 \else
5367 \expandafter\ltx@firstofone
5368 \fi
5369 }%
5370 }%
```

```

5371 \ltx@GlobalAppendToMacro\label@hook{%
5372   \HyperDestRename\@currentHref\label@name
5373 }%

\HyperDestLabelReplace
5374 \def\HyperDestLabelReplace#1{%
5375   \ltx@ifundefined{HyDL@#1}{%
5376     #1%
5377   }{%
5378     \csname HyDL@#1\endcsname
5379   }%
5380 }%

\HyperDestNameFilter
5381 \let\HyperDestNameFilter\HyperDestLabelReplace
5382 \else

\hyper@newdestlabel
5383 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace
5384 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename
@gobbletwo
5385 \fi
5386 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5387 \AddLineBeginAux{%
5388   \string\providecommand\string\hyper@newdestlabel[2]{}%
5389 }

```

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.

```

5390 \let\htmladdimg\hyperimage

```

```

5391 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5392 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5393 \def\htmlref#1#2{% anchor text, label
5394   \label@hyperref{#2}{#1}%
5395 }

```

This is really too much. The \LaTeX 2html 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.

```

5396 \def\@@latextohtmlX{%
5397   \let\hhyperref\hyperref
5398   \def\hyperref##1##2##3##4{% anchor text for HTML
5399     % text to print before label in print
5400     % label
5401     % post-label text in print
5402     ##2\ref{##4}##3%
5403   }%
5404 }

```

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.

```

5405 \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

```

```

5406 \def\HyField@NewFlag#1#2{%
5407   \lowercase{\HyField@NewOption{#2}}%
5408   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5409 }

```

```

\HyField@NewFlagOnly

```

```

5410 \def\HyField@NewFlagOnly#1#2{%

```

```

5411 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5412 }

```

\HyField@NewOption #1: option name

```

5413 \def\HyField@NewOption#1{%
5414 \expandafter\newif\csname ifFld@#1\endcsname
5415 \define@key{Field}{#1}[true]{%
5416 \lowercase{\Field@boolkey{##1}}{#1}%
5417 }%
5418 }

```

\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

```

5419 \def\HyField@NewBitsetFlag#1#2#3#4{%
5420 \begingroup
5421 \count@=#4\relax
5422 \advance\count@\m@ne
5423 \def\x##1{%
5424 \endgroup
5425 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5426 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5427 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5428 (\number#4) #2%
5429 }%
5430 \else
5431 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5432 \csname HyField@#3@##1\endcsname
5433 /#2%
5434 }%
5435 \fi
5436 }%
5437 \expandafter\x\expandafter{\the\count@}%
5438 }

```

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

```

5439 \def\HyField@UseFlag#1#2{%
5440 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5441 }

```

\HyField@@UseFlag

```

5442 \def\HyField@@UseFlag#1#2{%
5443 \bitsetSetValue{HyField@#2}{%
5444 \csname HyField@#2@#1\endcsname
5445 }{%
5446 \csname ifFld@#1\endcsname 1\else 0\fi
5447 }%
5448 }

```

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

```
5449 \def\HyField@SetFlag#1#2{%
5450 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5451 }
```

\HyField@@SetFlag

```
5452 \def\HyField@@SetFlag#1#2{%
5453 \bitsetSetValue{HyField@#2}{%
5454 \csname HyField@#2@#1\endcsname
5455 }{1}%
5456 }
```

\HyField@PrintFlags

```
5457 \def\HyField@PrintFlags#1#2{%
5458 \ifHy@verbose
5459 \begingroup
5460 \let\Hy@temp\@empty
5461 \let\MessageBreak\relax
5462 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5463 \bitsetGetSetBitList{HyField@#1}\do{%
5464 \edef\Hy@temp{%
5465 \Hy@temp
5466 \csname HyField@#1@\x\endcsname\MessageBreak
5467 }%
5468 }%
5469 \edef\x{\endgroup
5470 \noexpand\Hy@Info{%
5471 Field flags: %
5472 \expandafter\ifx\@car#1\@nil S\else/\fi
5473 #1 %
5474 \bitsetGetDec{HyField@#1} %
5475 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5476 \Hy@temp
5477 for #2%
5478 }%
5479 }\x
5480 \fi
5481 }
```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
5482 \HyField@NewFlag{Ff}{ReadOnly}{1}
5483 \HyField@NewFlag{Ff}{Required}{2}
5484 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
5485 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5486 \HyField@NewFlag{Ff}{Radio}{16}
```

```

5487 \HyField@NewFlag{Ff}{Pushbutton}{17}
5488 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
“Table 8.77 Field flags specific to text fields”
5489 \HyField@NewFlag{Ff}{Multiline}{13}
5490 \HyField@NewFlag{Ff}{Password}{14}
5491 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5492 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5493 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5494 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5495 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5496 \HyField@NewFlag{Ff}{Combo}{18}
5497 \HyField@NewFlag{Ff}{Edit}{19}
5498 \HyField@NewFlag{Ff}{Sort}{20}
5499 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5500 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5501 \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.

```

5502 \newif\ifFld@popdown
5503 \define@key{Field}{popdown}[true]{%
5504   \lowercase{\Field@boolkey{#1}}{popdown}%
5505 }

```

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.

```

5506 \HyField@NewFlag{F}{Invisible}{1}
5507 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5508 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5509 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5510 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5511 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5512 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5513 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5514 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5515 \ifHy@pdfa
5516   \def\HyField@PDFAFldWarning#1#2{%
5517     \Hy@Warning{%
5518       PDF/A: Annotation flag `#1' must\MessageBreak
5519       be set to `#2'%
5520     }%
5521   }%
5522   \Fld@invisiblefalse

```



```

5523 \def\Fld@invisibletrue{%
5524   \HyField@PDFAFIagWarning{invisible}{false}%
5525 }%
5526 \Fld@hiddenfalse
5527 \def\Fld@hiddenttrue{%
5528   \HyField@PDFAFIagWarning{hidden}{false}%
5529 }%
5530 \Fld@printrtrue
5531 \def\Fld@printfalse{%
5532   \HyField@PDFAFIagWarning{print}{true}%
5533 }%
5534 \Fld@nozoomtrue
5535 \def\Fld@nozoomfalse{%
5536   \HyField@PDFAFIagWarning{nozoom}{true}%
5537 }%
5538 \Fld@norotatetrue
5539 \def\Fld@norotatefalse{%
5540   \HyField@PDFAFIagWarning{norotate}{true}%
5541 }%
5542 \Fld@noviewfalse
5543 \def\Fld@noviewtrue{%
5544   \HyField@PDFAFIagWarning{noview}{false}%
5545 }%
5546 \fi

```

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

```

5547 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5548 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5549 \HyField@NewFlag{Submit}{GetMethod}{4}
5550 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5551 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5552 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5553 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5554 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5555 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5556 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5557 \HyField@NewFlag{Submit}{ExclFKey}{12}
5558 \HyField@NewFlag{Submit}{EmbedForm}{14}

5559 \define@key{Field}{export}{%
5560   \lowercase{\def\Hy@temp{#1}}%
5561   \@ifundefined{Fld@export@\Hy@temp}{%
5562     \@onelevel@sanitize\Hy@temp
5563     \Hy@Error{%
5564       Unknown export format ` \Hy@temp'.\MessageBreak
5565       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5566     } \@ehc
5567   }{%
5568     \let\Fld@export\Hy@temp
5569   }%

```

```

5570 }
5571 \def\Fld@export{fdf}
5572 \@namedef{Fld@export@fdf}{0}%
5573 \@namedef{Fld@export@html}{1}%
5574 \@namedef{Fld@export@xfdf}{2}%
5575 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5576 \def\HyField@FlagsSubmit{%
5577   \bitsetReset{HyField@Submit}%
5578   \ifcase\@nameuse{Fld@export@\Fld@export} %
5579     % FDF
5580     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5581     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5582     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5583     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5584     \HyField@UseFlag{Submit}{CanonicalFormat}%
5585     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5586     \HyField@UseFlag{Submit}{ExclFKey}%
5587     \HyField@UseFlag{Submit}{EmbedForm}%
5588   \or % HTML
5589     \HyField@SetFlag{Submit}{ExportFormat}%
5590     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5591     \HyField@UseFlag{Submit}{GetMethod}%
5592     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5593     \HyField@UseFlag{Submit}{CanonicalFormat}%
5594   \or % XFDF
5595     \HyField@SetFlag{Submit}{XFDF}%
5596     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5597     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5598     \HyField@UseFlag{Submit}{CanonicalFormat}%
5599   \or % PDF
5600     \HyField@SetFlag{Submit}{SubmitPDF}%
5601     \HyField@UseFlag{Submit}{GetMethod}%
5602   \fi
5603   \HyField@PrintFlags{Submit}{submit button field}%
5604   \bitsetIsEmpty{HyField@Submit}{%
5605     \let\Fld@submitflags\ltx@empty
5606   }{%
5607     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5608   }%
5609 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5610 \def\HyField@FlagsAnnot#1{%

```

```

5611 \bitsetReset{HyField@F}%
5612 \HyField@UseFlag{F}{Invisible}%
5613 \HyField@UseFlag{F}{Hidden}%
5614 \HyField@UseFlag{F}{Print}%
5615 \HyField@UseFlag{F}{NoZoom}%
5616 \HyField@UseFlag{F}{NoRotate}%
5617 \HyField@UseFlag{F}{NoView}%
5618 \HyField@UseFlag{F}{Locked}%
5619 \HyField@UseFlag{F}{ToggleNoView}%
5620 \HyField@UseFlag{F}{LockedContents}%
5621 \HyField@PrintFlags{F}{#1}%
5622 \bitsetIsEmpty{HyField@F}{%
5623   \let\Fld@annotflags\ltx@empty
5624 }{%
5625   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5626 }%
5627 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5628 \def\HyField@FlagsPushButton{%
5629   \HyField@FlagsAnnot{push button field}%
5630   \bitsetReset{HyField@Ff}%
5631   \HyField@UseFlag{Ff}{ReadOnly}%
5632   \HyField@UseFlag{Ff}{Required}%
5633   \HyField@UseFlag{Ff}{NoExport}%
5634   \HyField@SetFlag{Ff}{Pushbutton}%
5635   \HyField@PrintFlags{Ff}{push button field}%
5636   \bitsetIsEmpty{HyField@Ff}{%
5637     \let\Fld@flags\ltx@empty
5638   }{%
5639     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5640   }%
5641 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

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

```

```

5652 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5653 }%
5654 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5655 \def\HyField@FlagsRadioButton{%
5656 \HyField@FlagsAnnot{radio button field}%
5657 \bitsetReset{HyField@Ff}%
5658 \HyField@UseFlag{Ff}{ReadOnly}%
5659 \HyField@UseFlag{Ff}{Required}%
5660 \HyField@UseFlag{Ff}{NoExport}%
5661 \HyField@UseFlag{Ff}{NoToggleToOff}%
5662 \HyField@SetFlag{Ff}{Radio}%
5663 \HyField@UseFlag{Ff}{RadiosInUnison}%
5664 \HyField@PrintFlags{Ff}{radio button field}%
5665 \bitsetIsEmpty{HyField@Ff}{%
5666 \let\Fld@flags\ltx@empty
5667 }{%
5668 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5669 }%
5670 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5671 \def\HyField@FlagsText{%
5672 \HyField@FlagsAnnot{text field}%
5673 \bitsetReset{HyField@Ff}%
5674 \HyField@UseFlag{Ff}{ReadOnly}%
5675 \HyField@UseFlag{Ff}{Required}%
5676 \HyField@UseFlag{Ff}{NoExport}%
5677 \HyField@UseFlag{Ff}{Multiline}%
5678 \HyField@UseFlag{Ff}{Password}%
5679 \HyField@UseFlag{Ff}{FileSelect}%
5680 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5681 \HyField@UseFlag{Ff}{DoNotScroll}%
5682 \ifFld@comb
5683 \ifcase0\ifFld@multiline
5684 \else\ifFld@password
5685 \else\ifFld@fileselect
5686 \else 1\fi\fi\fi\relax
5687 \Hy@Error{%
5688 Field option `comb' cannot used together with\MessageBreak
5689 `multiline', `password', or `fileselect'%
5690 }\@ehc
5691 \else
5692 \HyField@UseFlag{Ff}{Comb}%

```

```

5693   \fi
5694 \fi
5695 \HyField@UseFlag{Ff}{RichText}%
5696 \HyField@PrintFlags{Ff}{text field}%
5697 \bitsetIsEmpty{HyField@Ff}{%
5698   \let\Fld@flags\ltx@empty
5699 }{%
5700   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5701 }%
5702 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5703 \def\HyField@FlagsChoice{%
5704   \HyField@FlagsAnnot{choice field}%
5705   \bitsetReset{HyField@Ff}%
5706   \HyField@UseFlag{Ff}{ReadOnly}%
5707   \HyField@UseFlag{Ff}{Required}%
5708   \HyField@UseFlag{Ff}{NoExport}%
5709   \HyField@UseFlag{Ff}{Combo}%
5710   \ifFld@combo
5711     \HyField@UseFlag{Ff}{Edit}%
5712   \fi
5713   \HyField@UseFlag{Ff}{Sort}%
5714   \HyField@UseFlag{Ff}{MultiSelect}%
5715   \ifFld@combo
5716     \ifFld@edit
5717       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5718     \fi
5719   \fi
5720   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5721   \HyField@PrintFlags{Ff}{choice field}%
5722   \bitsetIsEmpty{HyField@Ff}{%
5723     \let\Fld@flags\ltx@empty
5724   }{%
5725     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5726   }%
5727 }

```

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.

```

5728 \def\HyField@PDFChoices#1{%
5729   \begingroup
5730   \global\let\Fld@choices\ltx@empty

```

```

5731 \let\HyTmp@optlist\ltx@empty
5732 \let\HyTmp@optitem\relax
5733 \count@=0 %
5734 \kv@parse{#1}{%
5735   \Hy@pdfstringdef\kv@key\kv@key
5736   \ifx\kv@value\relax
5737     \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5738       \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}}%
5739     \else
5740       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5741     \fi
5742   \else
5743     \Hy@pdfstringdef\kv@value\kv@value
5744     \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}}%
5745   \fi
5746 \edef\HyTmp@optlist{%
5747   \HyTmp@optlist
5748   \HyTmp@optitem{\the\count@}{\kv@key}0%
5749 }%
5750 \advance\count@ by 1 %
5751 \@gobbletwo
5752 }%
5753 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5754 \ifFld@multiselect
5755   \HyField@@PDFChoices{DV}\Fld@default
5756   \HyField@@PDFChoices{V}\Fld@value
5757 \else
5758   \ifx\Fld@default\relax
5759   \else
5760     \pdfstringdef\Hy@gtemp\Fld@default
5761     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5762   \fi
5763   \ifx\Fld@value\relax
5764   \else
5765     \pdfstringdef\Hy@gtemp\Fld@value
5766     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5767   \fi
5768 \fi
5769 \endgroup
5770 }

```

\HyField@@PDFChoices

```

5771 \def\HyField@@PDFChoices#1#2{%
5772   \ifx#2\relax
5773   \else
5774     \count@=0 %
5775   \def\HyTmp@optitem##1##2##3{%
5776     \def\HyTmp@key{##2}%
5777     \ifx\HyTmp@key\Hy@gtemp
5778       \expandafter\def\expandafter\HyTmp@optlist\expandafter{%

```

```

5779 \HyTmp@optlist
5780 \HyTmp@optitem{##1}{##2}1%
5781 }%
5782 \let\HyTmp@found=Y%
5783 \else
5784 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5785 \HyTmp@optlist
5786 \HyTmp@optitem{##1}{##2}##3%
5787 }%
5788 \fi
5789 }%
5790 \expandafter\comma@parse\expandafter{#2}{%
5791 \pdfstringdef\Hy@gtemp\comma@entry
5792 \let\HyTmp@found=N %
5793 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5794 \HyTmp@optlist
5795 \ifx\HyTmp@found Y%
5796 \advance\count@ by 1 %
5797 \else
5798 \@onelevel@sanitize\comma@entry
5799 \PackageWarning{hyperref}{%
5800 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5801 \MessageBreak
5802 it cannot be found in the choices%
5803 }%
5804 \fi
5805 \@gobble
5806 }%
5807 \def\HyTmp@optitem##1##2##3{%
5808 \ifnum##3=1 %
5809 (##2)%
5810 \fi
5811 }%
5812 \ifcase\count@
5813 \or
5814 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5815 \else
5816 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5817 \ifx#1V%
5818 \def\HyTmp@optitem##1##2##3{%
5819 \ifnum##3=1 %
5820 \@firstofone{ ##1}%
5821 \fi
5822 }%
5823 \edef\HyTmp@optlist{\HyTmp@optlist}%
5824 \xdef\Fld@choices{%
5825 \Fld@choices
5826 /I\expandafter\@firstofone\HyTmp@optlist}%
5827 }%
5828 \fi

```

```

5829 \fi
5830 \fi
5831 }

```

20.3 Forms

\HyField@SetKeys

```

5832 \def\HyField@SetKeys{%
5833 \kvsetkeys{Field}%
5834 }

5835 \newif\ifFld@checked
5836 \newif\ifFld@disabled
5837 \Fld@checkedfalse
5838 \Fld@disabledfalse
5839 \newcount\Fld@menulength
5840 \newdimen\Fld@Width
5841 \newdimen\Fld@charsize
5842 \Fld@charsize=10\p@
5843 \def\Fld@maxlen{0}
5844 \def\Fld@align{0}
5845 \def\Fld@color{0 0 0 rg}
5846 \def\Fld@bcolor{1 1 1}
5847 \def\Fld@bordercolor{1 0 0}
5848 \def\Fld@bordersep{1\p@}
5849 \def\Fld@borderwidth{1}
5850 \def\Fld@borderstyle{S}
5851 \def\Fld@cbsymbol{4}
5852 \def\Fld@radiosymbol{H}
5853 \def\Fld@rotation{0}
5854 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5855 \def@endForm{\@endForm}
5856 \newif\ifForm@html
5857 \Form@htmlfalse
5858 \def\Form@boolkey#1#2{%
5859 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5860 }
5861 \define@key{Form}{action}{%
5862 \hyper@normalise\Hy@DefFormAction{#1}%
5863 }
5864 \def\Hy@DefFormAction{\def\Form@action}
5865 \def\enc@html{html}
5866 \define@key{Form}{encoding}{%
5867 \def\Hy@tempa{#1}%
5868 \ifx\Hy@tempa\enc@html
5869 \Form@htmltrue
5870 \def\Fld@export{html}%
5871 \else
5872 \Hy@Warning{%
5873 Form `encoding' key with \MessageBreak

```



```

5874     unknown value `#1'%
5875 }%
5876 \Form@htmlfalse
5877 \fi
5878 }
5879 \define@key{Form}{method}{%
5880 \lowercase{\def\Hy@temp{#1}}}%
5881 \@ifundefined{Form@method@\Hy@temp}{%
5882 \@onelevel@sanitize\Hy@temp
5883 \Hy@Error{%
5884     Unknown method `\'Hy@temp'.\MessageBreak
5885     Known values are `post' and `get'%
5886 } \@ehc
5887 }{%
5888 \let\Form@method\Hy@temp
5889 \ifcase\@nameuse{Form@method@\Hy@temp} %
5890 \Fld@getmethodfalse
5891 \else
5892 \Fld@getmethodtrue
5893 \fi
5894 }%
5895 }
5896 \def\Form@method{
5897 \@namedef{Form@method@post}{0}
5898 \@namedef{Form@method@get}{1}

5899 \newif\ifHyField@NeedAppearances
5900 \def\HyField@NeedAppearancesfalse{%
5901 \global\let\ifHyField@NeedAppearances\iffalse
5902 }
5903 \def\HyField@NeedAppearancetrue{%
5904 \global\let\ifHyField@NeedAppearances\iftrue
5905 }
5906 \HyField@NeedAppearancetrue
5907 \define@key{Form}{NeedAppearances}[true]{%
5908 \edef\Hy@tempa{#1}%
5909 \ifx\Hy@tempa\Hy@true
5910 \HyField@NeedAppearancetrue
5911 \else
5912 \ifx\Hy@tempa\Hy@false
5913 \HyField@NeedAppearancesfalse
5914 \else
5915 \Hy@Error{%
5916     Unexpected value `\'Hy@tempa'.\MessageBreak
5917     of option `NeedAppearances' instead of\MessageBreak
5918     `true' or `false'%
5919 } \@ehc
5920 \fi
5921 \fi
5922 }

```

```

5923 \def\Field@boolkey#1#2{%
5924   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5925 }
5926 \ifHy@texht
5927   \newtoks\Field@toks
5928   \Field@toks={ }%
5929   \def\Field@addtoks#1#2{%
5930     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5931     \@processme
5932   }%
5933 \else
5934   \def\Hy@WarnHTMLFieldOption#1{%
5935     \Hy@Warning{%
5936       HTML field option `#1'\MessageBreak
5937       is ignored%
5938     }%
5939   }%
5940 \fi
5941 \def\Fld@checkequals#1=#2=#3\\{%
5942   \def\@currDisplay{#1}%
5943   \ifx\\#2\\%
5944     \def\@currValue{#1}%
5945   \else
5946     \def\@currValue{#2}%
5947   \fi
5948   \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5949 }
5950 \define@key{Field}{loc}{%
5951   \def\Fld@loc{#1}%
5952 }
5953 \define@key{Field}{checked}[true]{%
5954   \lowercase{\Field@boolkey{#1}}{checked}%
5955 }
5956 \define@key{Field}{disabled}[true]{%
5957   \lowercase{\Field@boolkey{#1}}{disabled}%
5958 }
5959 \ifHy@texht
5960   \define@key{Field}{accesskey}{%
5961     \Field@addtoks{accesskey}{#1}%
5962   }%
5963   \define@key{Field}{tabkey}{%
5964     \Field@addtoks{tabkey}{#1}%
5965   }%
5966 \else
5967   \define@key{Field}{accesskey}{%
5968     \Hy@WarnHTMLFieldOption{accesskey}%
5969   }%
5970   \define@key{Field}{tabkey}{%
5971     \Hy@WarnHTMLFieldOption{tabkey}%
5972   }%

```

```

5973 \fi
5974 \define@key{Field}{name}{%
5975   \def\Fld@name{#1}%
5976 }
5977 \let\Fld@altname\relax
5978 \define@key{Field}{altname}{%
5979   \def\Fld@altname{#1}%
5980 }
5981 \let\Fld@mappingname\relax
5982 \define@key{Field}{mappingname}{%
5983   \def\Fld@mappingname{#1}%
5984 }
5985 \define@key{Field}{width}{%
5986   \def\Fld@width{#1}%
5987   \Field@Width#1\setbox0=\hbox{m}%
5988 }
5989 \define@key{Field}{maxlen}{%
5990   \def\Fld@maxlen{#1}%
5991 }
5992 \define@key{Field}{menulength}{%
5993   \Fld@menulength=#1\relax
5994 }
5995 \define@key{Field}{height}{%
5996   \def\Fld@height{#1}%
5997 }
5998 \define@key{Field}{charsize}{%
5999   \setlength{\Fld@charsize}{#1}%
6000 }
6001 \define@key{Field}{borderwidth}{%
6002   \Hy@defaultbp\Fld@borderwidth{#1}%
6003 }
6004 \def\Hy@defaultbp#1#2{%
6005   \begingroup
6006   \afterassignment\Hy@defaultbpAux
6007   \dimen@=#2bp\relax{#1}{#2}%
6008 }
6009 \begingroup\expandafter\expandafter\expandafter\endgroup
6010 \expandafter\ifx\csname dimexpr\endcsname\relax
6011   \def\Hy@defaultbpAux#1\relax#2#3{%
6012     \ifx!#1!%
6013       \endgroup
6014       \def#2{#3}%
6015     \else
6016       \dimen@=.99626\dimen@
6017       \edef\x{\endgroup
6018         \def\noexpand#2{%
6019           \strip@pt\dimen@
6020         }%
6021       }\x
6022   \fi

```

```

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

```

```

6073 \let\Fld@temp\ltx@empty
6074 \Fld@@DingDef#2\ding{ }\@nil
6075 \let#1\Fld@temp
6076 }
6077 \def\Fld@@DingDef#1\ding#2#3\@nil{%
6078 \expandafter\def\expandafter\Fld@temp\expandafter{%
6079 \Fld@temp
6080 #1%
6081 }%
6082 \ifx\#3\%
6083 \expandafter\@gobble
6084 \else
6085 \begingroup
6086 \lccode`0=#2\relax
6087 \lowercase{\endgroup
6088 \expandafter\def\expandafter\Fld@temp\expandafter{%
6089 \Fld@temp
6090 0%
6091 }%
6092 }%
6093 \expandafter\@firstofone
6094 \fi
6095 {%
6096 \Fld@@DingDef#3\@nil
6097 }%
6098 }

6099 \define@key{Field}{rotation}{%
6100 \def\Fld@rotation{#1}%
6101 }

6102 \define@key{Field}{backgroundcolor}{%
6103 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6104 }
6105 \define@key{Field}{bordercolor}{%
6106 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6107 }
6108 \define@key{Field}{color}{%
6109 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6110 }

6111 \let\Fld@onclick@code\ltx@empty
6112 \let\Fld@format@code\ltx@empty
6113 \let\Fld@validate@code\ltx@empty
6114 \let\Fld@calculate@code\ltx@empty
6115 \let\Fld@keystroke@code\ltx@empty
6116 \let\Fld@onfocus@code\ltx@empty
6117 \let\Fld@onblur@code\ltx@empty
6118 \let\Fld@onmousedown@code\ltx@empty
6119 \let\Fld@onmouseup@code\ltx@empty
6120 \let\Fld@onenter@code\ltx@empty
6121 \let\Fld@onexit@code\ltx@empty

```

```

6122 \def\Hy@temp#1{%
6123   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6124 }
6125 \def\Hy@@temp#1#2{%
6126   \ifHy@pdfa
6127     \define@key{Field}{#2}{%
6128       \Hy@Error{%
6129         PDF/A: Additional action `#2' is prohibited%
6130       }\@ehc
6131     }%
6132   \else
6133     \define@key{Field}{#2}{%
6134       \def#1{##1}%
6135     }%
6136   \fi
6137 }
6138 \Hy@temp{keystroke}
6139 \Hy@temp{format}
6140 \Hy@temp{validate}
6141 \Hy@temp{calculate}
6142 \Hy@temp{onfocus}
6143 \Hy@temp{onblur}
6144 \Hy@temp{onenter}
6145 \Hy@temp{onexit}

6146 \let\Fld@calculate@sortkey\ltx@empty
6147 \define@key{Field}{calculatesortkey}[1]{%
6148   \def\Fld@calculate@sortkey{#1}%
6149 }

6150 \ifHy@texht
6151   \def\Hy@temp#1{%
6152     \define@key{Field}{#1}{%
6153       \Field@addtoks{#1}{##1}%
6154     }%
6155   }%
6156 \else
6157   \def\Hy@temp#1{%
6158     \define@key{Field}{#1}{%
6159       \Hy@WarnHTMLFieldOption{#1}%
6160     }%
6161   }%
6162 \fi
6163 \Hy@temp{ondblclick}
6164 \Hy@temp{onmousedown}
6165 \Hy@temp{onmouseup}
6166 \Hy@temp{onmouseover}
6167 \Hy@temp{onmousemove}
6168 \Hy@temp{onmouseout}
6169 \Hy@temp{onkeydown}
6170 \Hy@temp{onkeyup}

```

```

6171 \Hy@temp{onselect}
6172 \Hy@temp{onchange}
6173 \Hy@temp{onkeypress}
6174 \ifHy@texht
6175   \define@key{Field}{onclick}{%
6176     \Field@addtoks{onclick}{#1}%
6177   }%
6178 \else
6179   \ifHy@pdfa
6180     \define@key{Field}{onclick}{%
6181       \Hy@Error{%
6182         PDF/A: Action `onclick' is prohibited%
6183       } \@ehc
6184     }%
6185   \else
6186     \define@key{Field}{onclick}{%
6187       \def\Fld@onclick@code{#1}%
6188     }%
6189   \fi
6190 \fi

6191 \DeclareRobustCommand\TextField{%
6192   \@ifnextchar[{\@TextField}{\@TextField[]}%
6193 }
6194 \DeclareRobustCommand\ChoiceMenu{%
6195   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6196 }
6197 \DeclareRobustCommand\CheckBox{%
6198   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6199 }
6200 \DeclareRobustCommand\PushButton{%
6201   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6202 }
6203 \DeclareRobustCommand\Gauge{%
6204   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6205 }
6206 \DeclareRobustCommand\Submit{%
6207   \@ifnextchar[{\@Submit}{\@Submit[]}%
6208 }
6209 \DeclareRobustCommand\Reset{%
6210   \@ifnextchar[{\@Reset}{\@Reset[]}%
6211 }
6212 \def\LayoutTextField#1#2{% label, field
6213   \def\Hy@temp{#1}%
6214   \ifx\Hy@temp\@empty
6215     #2%
6216   \else
6217     #1 #2%
6218   \fi
6219 }

```

```

6220 \def\LayoutChoiceField#1#2{% label, field
6221   \def\Hy@temp{#1}%
6222   \ifx\Hy@temp\@empty
6223     #2%
6224   \else
6225     #1 #2%
6226   \fi
6227 }
6228 \def\LayoutCheckField#1#2{% label, field
6229   \def\Hy@temp{#1}%
6230   \ifx\Hy@temp\@empty
6231     #2%
6232   \else
6233     #1 #2%
6234   \fi
6235 }
6236 \def\LayoutPushButtonField#1{% button
6237   #1%
6238 }
6239 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6240 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6241 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6242 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6243 \def\MakeButtonField#1{%
6244   \sbox0{%
6245     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6246   }%
6247   \@tempdima\ht0 %
6248   \advance\@tempdima by \Fld@borderwidth bp %
6249   \advance\@tempdima by \Fld@borderwidth bp %
6250   \ht0\@tempdima
6251   \@tempdima\dp0 %
6252   \advance\@tempdima by \Fld@borderwidth bp %
6253   \advance\@tempdima by \Fld@borderwidth bp %
6254   \dp0\@tempdima
6255   \box0\relax
6256 }
6257 \def\DefaultHeightofSubmit{14pt}
6258 \def\DefaultWidthofSubmit{2cm}
6259 \def\DefaultHeightofReset{14pt}
6260 \def\DefaultWidthofReset{2cm}
6261 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6262 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6263 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6264 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6265 \def\DefaultHeightofText{\normalbaselineskip}
6266 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6267 \def\DefaultWidthofText{3cm}
6268 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6269 \def\DefaultOptionsofReset{print,name=Reset,noexport}

```



```

6270 \def\DefaultOptionsofPushButton{print}
6271 \def\DefaultOptionsofCheckBox{print}
6272 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6273 \def\DefaultOptionsofListBox{print}
6274 \def\DefaultOptionsofComboBox{print,edit,sort}
6275 \def\DefaultOptionsofPopdownBox{print}
6276 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6277 \ifHy@hyperfigures
6278 \Hy@Info{Hyper figures ON}%
6279 \else
6280 \Hy@Info{Hyper figures OFF}%
6281 \fi
6282 \ifHy@nesting
6283 \Hy@Info{Link nesting ON}%
6284 \else
6285 \Hy@Info{Link nesting OFF}%
6286 \fi
6287 \ifHy@hyperindex
6288 \Hy@Info{Hyper index ON}%
6289 \else
6290 \Hy@Info{Hyper index OFF}%
6291 \fi
6292 \ifHy@backref
6293 \Hy@Info{backreferencing ON}%
6294 \else
6295 \Hy@Info{backreferencing OFF}%
6296 \fi
6297 \ifHy@colorlinks
6298 \Hy@Info{Link coloring ON}%
6299 \else
6300 \Hy@Info{Link coloring OFF}%
6301 \fi
6302 \ifHy@ocgcolorlinks
6303 \Hy@Info{Link coloring with OCG ON}%
6304 \else
6305 \Hy@Info{Link coloring with OCG OFF}%
6306 \fi
6307 \ifHy@pdfa
6308 \Hy@Info{PDF/A mode ON}%
6309 \else
6310 \Hy@Info{PDF/A mode OFF}%
6311 \fi

```

22 Low-level utility macros

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

```
6312 \edef\hyper@hash{\string#}  
6313 \edef\hyper@tilde{\string~}  
6314 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6315 \def\@currentHref{Doc-Start}  
6316 \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.

```
6317 \Hy@AtBeginDocument{%  
6318   \Hy@pdfstringtrue  
6319   \PDF@SetupDoc  
6320   \let\PDF@SetupDoc\@empty  
6321   \Hy@DisableOption{pdfpagescrop}%  
6322   \Hy@DisableOption{pdfpagemode}%  
6323   \Hy@DisableOption{pdfnonfullscreenpagemode}%  
6324   \Hy@DisableOption{pdfdirection}%  
6325   \Hy@DisableOption{pdfviewarea}%  
6326   \Hy@DisableOption{pdfviewclip}%  
6327   \Hy@DisableOption{pdfprintarea}%  
6328   \Hy@DisableOption{pdfprintclip}%  
6329   \Hy@DisableOption{pdfprintscaling}%  
6330   \Hy@DisableOption{pdfduplex}%  
6331   \Hy@DisableOption{pdfpicktraybypdfsize}%  
6332   \Hy@DisableOption{pdfprintpagerange}%  
6333   \Hy@DisableOption{pdfnumcopies}%  
6334   \Hy@DisableOption{pdfstartview}%  
6335   \Hy@DisableOption{pdfstartpage}%  
6336   \Hy@DisableOption{pdftoolbar}%  
6337   \Hy@DisableOption{pdfmenubar}%  
6338   \Hy@DisableOption{pdfwindowui}%  
6339   \Hy@DisableOption{pdfwindow}%  
6340   \Hy@DisableOption{pdfcenterwindow}%  
6341   \Hy@DisableOption{pdfdisplaydoctitle}%  
6342   \Hy@DisableOption{pdfpagelayout}%  
6343   \Hy@DisableOption{pdflang}%  
6344   \Hy@DisableOption{baseurl}%  
6345   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi  
6346   \Hy@pdfstringfalse  
6347 }
```

Ignore star from referencing macros:

```
6348 \LetLtxMacro\NoHy@OrgRef\ref  
6349 \DeclareRobustCommand*{\ref}{%  
6350   \@ifstar\NoHy@OrgRef\NoHy@OrgRef  
6351 }
```

```

6352 \LetLtxMacro\NoHy@OrgPageRef\pageref
6353 \DeclareRobustCommand*\pageref}{%
6354 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6355 }

```

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.

```

6356 \def\NoHyper{%
6357 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6358 \def\hyper@anchor##1##2{##2\Hy@xspace@end}%
6359 \global\let\hyper@livelink\hyper@link
6360 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6361 \let\hyper@anchor\ltx@gobble
6362 \let\hyper@anchorstart\ltx@gobble
6363 \def\hyper@anchorend{\Hy@xspace@end}%
6364 \let\hyper@linkstart\ltx@gobbletwo
6365 \def\hyper@linkend{\Hy@xspace@end}%
6366 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6367 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6368 \let\Hy@backout\@gobble
6369 }
6370 \def\stop@hyper{%
6371 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6372 \let\Hy@backout\@gobble
6373 \let\hyper@@anchor\ltx@gobble
6374 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6375 \let\hyper@anchor\ltx@gobble
6376 \let\hyper@anchorstart\ltx@gobble
6377 \def\hyper@anchorend{\Hy@xspace@end}%
6378 \let\hyper@linkstart\ltx@gobbletwo
6379 \def\hyper@linkend{\Hy@xspace@end}%
6380 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6381 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6382 }
6383 \def\endNoHyper{%
6384 \global\let\hyper@link\hyper@livelink
6385 }
6386 \</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:

```
6387 \*nohyperref
6388 \RequirePackage{letltxmacro}[2008/06/13]
6389 \let\hyper@@anchor\@gobble
6390 \def\hyper@link#1#2#3{#3}%
6391 \let\hyper@anchorstart\@gobble
6392 \let\hyper@anchorend\@empty
6393 \let\hyper@linkstart\@gobbletwo
6394 \let\hyper@linkend\@empty
6395 \def\hyper@linkurl#1#2{#1}%
6396 \def\hyper@linkfile#1#2#3{#1}%
6397 \def\hyper@link@{#1}#2#3{}%
6398 \let\PDF@SetupDoc\@empty
6399 \let\PDF@FinishDoc\@empty
6400 \def\nohyperpage#1{#1}
```

Some top-level commands:

```
6401 \def\Acrobatmenu#1#2{\leavevmode#2}
6402 \let\pdfstringdefDisableCommands\@gobbletwo
6403 \let\texorpdfstring\@firstoftwo
6404 \let\pdfbookmark\@undefined
6405 \newcommand\pdfbookmark[3]{}{}
6406 \let\phantomsection\@empty
6407 \let\hypersetup\@gobble
6408 \let\hyperbaseurl\@gobble
6409 \newcommand*\{href}[3]{}{#3}
6410 \let\hyperdef\@gobbletwo
6411 \let\hyperlink\@gobble
6412 \let\hypertarget\@gobble
6413 \def\hyperref{%
6414   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6415 }
6416 \long\def\@gobbleopt[#1]{}
6417 \let\hyperpage\@empty
```

Ignore star from referencing macros:

```
6418 \LetLtxMacro\NoHy@OrgRef\ref
6419 \DeclareRobustCommand*\ref{%
6420   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6421 }
6422 \LetLtxMacro\NoHy@OrgPageRef\pageref
6423 \DeclareRobustCommand*\pageref{%
6424   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6425 }
6426 \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}`

```
6427 <*package>
6428 \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.

```
6429 \if@files
6430 \ifHy@typexml
6431 \immediate\closeout\@mainaux
6432 \immediate\openout\@mainaux\jobname.aux\relax
6433 \immediate\write\@auxout{<relaxxml>\relax}%
6434 \fi
6435 \immediate\write\@auxout{%
6436 \string\providecommand\string\HyperFirstAtBeginDocument{%
6437 \string\AtBeginDocument}^^J%
6438 \string\HyperFirstAtBeginDocument{%
6439 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6440 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6441 \string\gdef\string\contentsline%
6442 \string#1\string#2\string#3\string#4{%
6443 \string\oldcontentsline%
6444 {\string#1}{\string#2}{\string#3}}^^J%
6445 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6446 \string\gdef\string\newlabel\string#1\string#2{%
6447 \string\newlabelxx{\string#1}\string#2}^^J%
6448 \string\gdef\string\newlabelxx%
6449 \string#1\string#2\string#3\string#4\string#5\string#6{%
6450 \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.

```
6451 \string\AtEndDocument{%
6452 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6453 \string\let\string\contentsline\string\oldcontentsline^^J%
6454 \string\let\string\newlabel\string\oldnewlabel^^J%
6455 \string\fi%
6456 }^^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.

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

```

6462 \fi
6463 \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.

```

6464 \ifx\hyper@last\@undefined
6465 \def\@starttoc#1{%
6466   \begingroup
6467   \makeatletter
6468   \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6469   \IfFileExists{\jobname.#1}{%
6470     \Hy@WarningNoLine{%
6471       old #1 file detected, not used; run LaTeX again%
6472     }%
6473   }{}%
6474   \if@filesw
6475     \expandafter\newwrite\csname tf@#1\endcsname
6476     \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6477   \fi
6478   \@nobreakfalse
6479   \endgroup
6480   }%
6481   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}}{}%
6482 \fi
6483 }

```

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`.

```

6484 \ifHy@pdfusetitle
6485 \let\HyOrg@title\title
6486 \let\HyOrg@author\author
6487 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6488 \def\Hy@scanopttitle[#1]{%
6489   \gdef\Hy@title{#1}%
6490   \HyOrg@title{#1}%
6491 }%
6492 \def\Hy@scantitle#1{%
6493   \gdef\Hy@title{#1}%
6494   \HyOrg@title{#1}%
6495 }%
6496 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6497 \def\Hy@scanoptauthor[#1]{%
6498   \gdef\Hy@author{#1}%

```

```

6499 \HyOrg@author{#1}%
6500 }%
6501 \def\Hy@scanauthor#1{%
6502 \gdef\Hy@author{#1}%
6503 \HyOrg@author{#1}%
6504 }%

```

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.

```

6505 \begingroup
6506 \def\process@me#1\@nil#2{%
6507 \expandafter\let\expandafter\x\csname @#2\endcsname
6508 \edef\y{\expandafter\strip@prefix\meaning\x}%
6509 \def\c##1##2\@nil{%
6510 \ifx\\##1\\%
6511 \else
6512 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6513 \expandafter{\x}%
6514 \fi
6515 }%
6516 \expandafter\c\y\relax#1\@nil
6517 }%
6518 \expandafter\process@me\string\@latex@\@nil{title}%
6519 \expandafter\process@me\string\@latex@\@nil{author}%
6520 \endgroup
6521 \fi
6522 \Hy@DisableOption{pdfusetitle}

```

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

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

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

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

A possible ¹removes its argument.

```

6523 \def\Hy@UseMaketitleString#1{%
6524 \ltx@ifundefined{Hy@#1}{-}{%
6525 \begingroup
6526 \let\Hy@saved@hook\pdfstringdefPreHook
6527 \pdfstringdefDisableCommands{%
6528 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6529 \let\newline\\%
6530 \def\and{;}%
6531 \let\thanks\@gobble%
6532 }%

```

```

6533 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6534 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6535 \csname Hy@#1\endcsname\@empty
6536 }%
6537 \fi
6538 \global\let\pdfstringdefPreHook\Hy@saved@hook
6539 \endgroup
6540 }%
6541 }
6542 \def\Hy@newline@title#1{ #1}
6543 \def\Hy@newline@author#1{, #1}
6544 \def\Hy@UseMaketitleInfos{%
6545 \Hy@UseMaketitleString{title}%
6546 \Hy@UseMaketitleString{author}%
6547 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

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

```



```

6574 \PDF@FinishDoc
6575 \global\let\PDF@FinishDoc\ltx@empty
6576 }

```

28.1 PDF /PageLabels

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

```

6577 \ifHy@pdfpagelabels
6578 \begingroup\expandafter\expandafter\expandafter\endgroup
6579 \expandafter\ifx\csname thepage\endcsname\relax
6580 \Hy@pdfpagelabelsfalse
6581 \Hy@WarningNoLine{%
6582   Option `pdfpagelabels' is turned off\MessageBreak
6583   because \string\thepage\space is undefined%
6584 }%
6585 \csname fi\endcsname
6586 \csname iffalse\expandafter\endcsname
6587 \fi

```

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

```

6588 \def\thispdfpagelabel#1{%
6589   \gdef\HyPL@thisLabel{#1}%
6590 }%
6591 \global\let\HyPL@thisLabel\relax

```

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

```

6592 \let\HyPL@Labels\ltx@empty

```

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

```

6593 \newcount\Hy@abspage
6594 \Hy@abspage=0 %

```

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

```

6595 \def\HyPL@LastType{init}%
6596 \def\HyPL@LastNumber{0}%
6597 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6598 \def\HyPL@arabic{D}%
6599 \def\HyPL@Roman{R}%
6600 \def\HyPL@roman{r}%
6601 \def\HyPL@Alph{A}%
6602 \def\HyPL@alph{a}%
6603 \let\HyPL@SlidesSetPage\ltx@empty
6604 \ltx@ifclassloaded{slides}{%
6605   \def\HyPL@SlidesSetPage{%
6606     \advance\c@page\ltx@one

```

```

6607 \ifnum\value{page}>\lt\ltx@one
6608 \protected@edef\HyPL@SlidesOptionalPage{%
6609 \Hy@SlidesFormatOptionalPage{\thepage}%
6610 }%
6611 \else
6612 \let\HyPL@SlidesOptionalPage\ltx@empty
6613 \fi
6614 \advance\c@page-\lt\ltx@one
6615 \def\HyPL@page{%
6616 \csname the\Hy@SlidesPage\endcsname
6617 \HyPL@SlidesOptionalPage
6618 }%
6619 }%
6620 }{}%

```

`\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.

```

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

```

```

6654     \let\Hy@temp N%
6655     \fi
6656     \Hy@StepCount\c@page
6657   \fi
6658   \if N\Hy@temp
6659     \ifx\HyPL@Type\relax
6660       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6661     \else
6662       \HyPL@StorePageLabel{%
6663         \ifx\HyPL@Prefix\@empty
6664         \else
6665           /P(\HyPL@Prefix)%
6666         \fi
6667       /S/\csname HyPL\HyPL@Type\endcsname
6668       \ifnum\the\c@page=1 %
6669       \else
6670         \space/St \the\c@page
6671       \fi
6672     }%
6673   \fi
6674   \fi
6675   \xdef\HyPL@LastNumber{\the\c@page}%
6676   \global\let\HyPL@LastType\HyPL@Type
6677   \global\let\HyPL@LastPrefix\HyPL@Prefix
6678 \endgroup
6679 \Hy@GlobalStepCount\Hy@abspage
6680 }%

```

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

```

6681 \def\HyPL@CheckThePage#1\@nil{%
6682   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6683 }%

```

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

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

```

6684 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6685   \def\Hy@tempa{#4}%
6686   \def\Hy@tempb{\csname\endcsname\c@page}%
6687   \ifx\Hy@tempa\Hy@tempb
6688     \expandafter\ifx\csname HyPL#3\endcsname\relax
6689     \else
6690       \def\HyPL@Type{#3}%
6691       \def\HyPL@Prefix{#2}%
6692     \fi
6693   \else
6694     \begingroup

```

```

6695 \let\Hy@next\endgroup
6696 \let\HyPL@found\@undefined
6697 \def\arabic{\HyPL@Format{arabic}}%
6698 \def\Roman{\HyPL@Format{Roman}}%
6699 \def\roman{\HyPL@Format{roman}}%
6700 \def\Alph{\HyPL@Format{Alph}}%
6701 \def\alph{\HyPL@Format{alph}}%
6702 \protected@edef\Hy@temp{#1}%
6703 \ifx\HyPL@found\relax
6704 \toks@{\expandafter{\Hy@temp}}%
6705 \edef\Hy@next{\endgroup
6706 \noexpand\HyPL@@@CheckThePage\the\toks@
6707 \noexpand\HyPL@found\relax\noexpand\@nil
6708 }%
6709 \fi
6710 \Hy@next
6711 \fi
6712 }%

```

`\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`.

```

6713 \def\HyPL@Format#1#2{%
6714 \ifx\HyPL@found\@undefined
6715 \expandafter\ifx\csname c@#2\endcsname\c@page
6716 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6717 \else
6718 \expandafter\noexpand\csname#1\endcsname{#2}%
6719 \fi
6720 \else
6721 \expandafter\noexpand\csname#1\endcsname{#2}%
6722 \fi
6723 }%

```

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

```

6724 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6725 \def\Hy@tempa{#3}%
6726 \def\Hy@tempb{\HyPL@found\relax}%
6727 \ifx\Hy@tempa\Hy@tempb
6728 \def\HyPL@Type{#2}%
6729 \def\HyPL@Prefix{#1}%
6730 \fi
6731 }%

```

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

```

6732 \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`.

```
6733 \def\HyPL@Useless{0<</S/D>>}%
6734 \@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.

```
6735 \def\HyPL@SetPageLabels{%
6736   \@onelevel@sanitize\HyPL@Labels
6737   \ifx\HyPL@Labels\@empty
6738   \else
6739     \ifx\HyPL@Labels\HyPL@Useless
6740     \else
6741       \Hy@PutCatalog{/PageLabels<</Nums\HyPL@Labels>>}%
6742     \fi
6743   \fi
6744 }%
```

```
6745 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6746 \fi
```

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

```
6747 \Hy@DisableOption{pdfpagelabels}
6748 </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`

```
6749 <*pdfTeX>
6750 \pdf@ifdraftmode{%
6751   \let\Hy@PutCatalog\ltx@gobble
6752 }{%
6753   \let\Hy@PutCatalog\pdfcatalog
6754 }
6755 </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.

```
6756 <*vTeX>
6757 \providecommand*{\XR@ext}{pdf}
6758 \edef\Hy@VTeXversion{%
6759   \ifx\VTeXversion\@undefined
6760     \z@
```

```

6761 \else
6762 \ifx\VTexversion\relax
6763 \z@
6764 \else
6765 \VTexversion
6766 \fi
6767 \fi
6768 }
6769 \begingroup
6770 \ifnum\Hy@VTexversion<660 %
6771 \gdef\Hy@PutCatalog#1{%
6772 \Hy@WarningNoLine{%
6773 VTeX 6.59g or above required for pdfpagelabels%
6774 }%
6775 }%
6776 \else
6777 \gdef\Hy@PutCatalog#1{%
6778 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6779 }%
6780 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6781 \ifx\\#2\\%
6782 \else
6783 \immediate\special{!pdfpagelabels #2}%
6784 \fi
6785 }%
6786 \fi
6787 \endgroup
6788 </vtex>
6789 <*pdftex | vtex>

```

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

```

6790 \ifHy@pdfpagelabels
6791 \def\HyPL@StorePageLabel#1{%
6792 \toks@ \expandafter{\HyPL@Labels}%
6793 \xdef\HyPL@Labels{%
6794 \the\toks@
6795 \the\Hy@abspage<<#1>>%
6796 }%
6797 }%

```

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.

```

6798 \RequirePackage{atveryend}[2009/12/07]%
6799 \AtVeryEndDocument{%
6800 \HyPL@SetPageLabels
6801 }%
6802 \fi
6803 </pdftex | vtex>

```

28.1.2 xetex

```
6804 <*xetex>
6805 \HyPsd@LoadUnicode
6806 \Hy@unicodetrue
6807 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6808 \else
6809 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6810 \fi
6811 \HyPsd@LoadStringEncoding
6812 \define@key{Hyp}{unicode}[true]{%
6813 \Hy@boolkey{unicode}{#1}%
6814 \ifHy@unicode
6815 \else
6816 \Hy@Warning{%
6817 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6818 option setting `unicode=false'%
6819 }%
6820 \Hy@unicodetrue
6821 \fi
6822 }
6823 \define@key{Hyp}{pdfencoding}{%
6824 \edef\HyPsd@temp{#1}%
6825 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6826 \let\HyPsd@pdfencoding\HyPsd@temp
6827 \else
6828 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6829 \let\HyPsd@pdfencoding\HyPsd@temp
6830 \else
6831 \Hy@Warning{%
6832 XeTeX driver only supports\MessageBreak
6833 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6834 setting `pdfencoding=\HyPsd@temp'%
6835 }%
6836 \fi
6837 \fi
6838 }
6839 \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:

```
6840 \def\setpdfinkmargin#1{%
6841 \begingroup
6842 \setlength{\dimen@}{#1}%
6843 \special{dvipdfmx:config g \strip@pt\dimen@}%
6844 \endgroup}
6845 </xetex>
```

set the pdf version

```
6846 <*dvipdfm | xetex>
6847 \special{pdf:majorversion \Hy@pdf@majorversion}
```

```

6848 \special{pdf:minorversion \Hy@pdf@minorversion}
6849 </dvipdfm | xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6850 <*pdfmarkbase>
6851 \begingroup
6852 \@ifundefined{headerps@out}{-}{%
6853 \toks@ \expandafter{\Hy@FirstPageHook}%
6854 \xdef\Hy@FirstPageHook{%
6855 \noexpand\headerps@out{%
6856 systemdict /pdfmark known%
6857 }{%
6858 userdict /?pdfmark systemdict /exec get put%
6859 }{%
6860 userdict /?pdfmark systemdict /pop get put %
6861 userdict /pdfmark systemdict /cleartomark get put%
6862 }%
6863 ifelse%
6864 }%
6865 \the\toks@
6866 }%
6867 }%
6868 \endgroup
6869 </pdfmarkbase>

```

\Hy@PutCatalog

```

6870 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6871 <*pdfmarkbase>
6872 \def\Hy@PutCatalog#1{%
6873 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6874 }
6875 </pdfmarkbase>

6876 <*pdfmarkbase | dvipdfm | xetex>
6877 \ifHy@pdfpagelabels

```

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

```

6878 \def\HyPL@StorePageLabel#1{%
6879 \if@filesw
6880 \begingroup
6881 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6882 \immediate\write\@mainaux{%
6883 \string\HyPL@Entry{\Hy@tempa}%
6884 }%
6885 \endgroup
6886 \fi
6887 }%

```

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.


```

6888 \Hy@AtBeginDocument{%
6889   \if@filesw
6890     \immediate\write\@mainaux{%
6891       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6892     }%
6893   \fi
6894   \ifx\HyPL@Labels\@empty
6895     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6896   \else
6897     \HyPL@SetPageLabels
6898   \fi
6899   \let\HyPL@Entry\@gobble
6900 }%

\HyPL@Entry
6901 \def\HyPL@Entry#1{%
6902   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6903     \HyPL@Labels
6904     #1%
6905   }%
6906 }%

6907 \fi
6908 </pdfmarkbase | dvipdfm | xetex>
6909 <*package>

6910 \ifx\MaybeStopEarly\relax
6911 \else
6912   \Hy@stoppedearlytrue
6913   \expandafter\MaybeStopEarly
6914 \fi
6915 \Hy@stoppedearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

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

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

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

Start with a fallback for equations

```

6916 \def\Hy@CounterExists#1{%
6917   \begingroup\expandafter\expandafter\expandafter\endgroup
6918   \expandafter\ifx\csname c@#1\endcsname\relax
6919     \expandafter\@gobble
6920   \else
6921     \begingroup\expandafter\expandafter\expandafter\endgroup
6922     \expandafter\ifx\csname the#1\endcsname\relax
6923       \expandafter\expandafter\expandafter\@gobble
6924     \else
6925       \expandafter\expandafter\expandafter\@firstofone
6926     \fi
6927   \fi
6928 }
6929 \Hy@CounterExists{section}{%
6930   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6931 }
6932 \Hy@CounterExists{part}{%
6933   \providecommand\theHpart{\arabic{part}}}%
6934 }
6935 \ltx@ifundefined{thechapter}{%
6936   \providecommand\theHsection   {\arabic{section}}}%
6937   \providecommand\theHfigure    {\arabic{figure}}}%
6938   \providecommand\theHtable     {\arabic{table}}}%
6939 }{%
6940   \providecommand\theHchapter   {\arabic{chapter}}}%
6941   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6942   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6943   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6944 }
6945 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6946 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6947 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6948 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6949 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6950 \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.

```

6951 \let\H@item\item
6952 \newcounter{Item}
6953 \def\theHItem{\arabic{Item}}
6954 \def\item{%
6955   \@hyper@itemfalse

```

```

6956 \if@nmbrlist\@hyper@itemtrue\fi
6957 \H@item
6958 }

6959 \providecommand\theHenumi {\theHItem}
6960 \providecommand\theHenumii {\theHItem}
6961 \providecommand\theHenumiii {\theHItem}
6962 \providecommand\theHenumiv {\theHItem}
6963 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6964 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6965 \@ifundefined{theHHmpfootnote}{%
6966 \let\theHHmpfootnote\theHHfootnote
6967 }{}

```

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.

```

6968 \let\H@refstepcounter\refstepcounter
6969 \edef\name@of@eq{equation}%
6970 \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.

```

6971 \newif\if@hyper@item
6972 \newif\if@skiphyperref
6973 \@hyper@itemfalse
6974 \@skiphyperreffalse
6975 \def\refstepcounter#1{%
6976 \ifHy@pdfstring
6977 \else
6978 \H@refstepcounter{#1}%
6979 \edef\This@name{#1}%
6980 \ifx\This@name\name@of@slide
6981 \else
6982 \if@skiphyperref
6983 \else
6984 \if@hyper@item
6985 \stepcounter{Item}%
6986 \hyper@refstepcounter{Item}%
6987 \@hyper@itemfalse
6988 \else
6989 \hyper@refstepcounter{#1}%
6990 \fi
6991 \fi
6992 \fi
6993 \fi
6994 }
6995 \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.

```
6996 \ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
6997 \def\hyper@refstepcounter#1{%
6998   \edef\This@name{#1}%
6999   \ifx\This@name\name@of@eq
7000     \ifundefined{theHequation}{%
7001       \make@stripped@name{\theequation}%
7002       \let\theHequation\newname
7003     }{}%
7004   \fi
7005   \HyCnt@ProvideTheHCounter{#1}%
7006   \hyper@makecurrent{#1}%
7007   \ifmeasuring@
7008   \else
7009     \Hy@raisedlink{%
7010       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7011     }%
7012   \fi
7013 }
```

`\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`, L^AT_EX 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 L^AT_EX’, substring search `\in@` can be used.

```
7014 \def\HyCnt@ProvideTheHCounter#1{%
7015   \ifundefined{theH#1}{%
7016     \expandafter\def\cename theH#1\endcename{}%
7017     \def\Hy@temp{\@elt{#1}}%
7018     \ltx@onelevel@sanitize\Hy@temp
7019     \let\HyOrg@elt\@elt
7020     \edef\@elt{%
7021       \noexpand\HyCnt@LookForParentCounter
7022       \expandafter\noexpand\cename theH#1\endcename
7023     }%
7024     \cl@ckpt
7025     \let\@elt\HyOrg@elt
7026     \expandafter
7027     \ltx@LocalAppendToMacro\cename theH#1\expandafter\endcename
7028     \expandafter{%
7029       \expandafter\@arabic\cename c@#1\endcename
7030     }%
7031   }{}%
7032 }
```

\Hy@LookForParentCounter

```

7033 \def\HyCnt@LookForParentCounter#1#2{%
7034   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7035   \ltx@ifundefined{cl@#2}{%
7036   }{%
7037     \ltx@onelevel@sanitize\Hy@temp@A
7038     \edef\Hy@temp@A{%
7039       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7040     }\Hy@temp@A
7041     \ifin@
7042       \ltx@ifundefined{theH#2}{%
7043         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7044         \expandafter{%
7045           \expandafter\@arabic\csname c@#2\endcsname.%
7046         }%
7047       }{%
7048         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7049         \expandafter{%
7050           \csname theH#2\endcsname.%
7051         }%
7052       }%
7053     \fi
7054   }%
7055 }

```

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.

```

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

```

```

7074     \Alph{#1}%
7075     \fi
7076     \fi
7077 }%
7078 \def\appendix{%
7079   \ltx@ifundefined{chapter}{%
7080     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7081   }{%
7082     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7083   }%
7084   \xdef\Hy@chapapp{\Hy@appendixstring}%
7085   \HyOrg@appendix
7086 }%
7087 }

```

\Hy@Test@alph

```

7088 \def\Hy@Test@alph#1{%
7089   \ifcase#1\or
7090     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7091     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7092     u\or v\or w\or x\or y\or z%
7093   \else
7094     \@ctrerr
7095   \fi
7096 }

```

\Hy@Test@Alph

```

7097 \def\Hy@Test@Alph#1{%
7098   \ifcase#1\or
7099     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7100     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7101     U\or V\or W\or X\or Y\or Z%
7102   \else
7103     \@ctrerr
7104   \fi
7105 }

```

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

```

7106 \def\hyper@makecurrent#1{%
7107   \begingroup
7108     \Hy@safe@activetrue
7109     \edef\Hy@param{#1}%
7110     \ifx\Hy@param\Hy@chapterstring
7111       \let\Hy@param\Hy@chapapp
7112     \fi
7113     \ifHy@hypertextnames
7114       \let\@number\@firstofone
7115     \def\@fnsymbol##1{\fnsymbol\number##1}%

```

```

7116 \def\@arabic##1{\number##1}%
7117 \ifx\@alph\Hy@Test@alph
7118 \else
7119 \def\@alph{alph\number}%
7120 \fi
7121 \ifx\@Alph\Hy@Test@Alph
7122 \else
7123 \def\@Alph{Alph\number}%
7124 \fi
7125 \ifHy@naturalnames
7126 \let\textlatin\@firstofone
7127 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7128 \else
7129 \xdef\HyperGlobalCurrentHref{%
7130 \csname
7131 the%
7132 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7133 #1%
7134 \endcsname
7135 }%
7136 \fi
7137 \xdef\HyperGlobalCurrentHref{%
7138 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7139 }%
7140 \else
7141 \Hy@GlobalStepCount\Hy@linkcounter
7142 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7143 \fi
7144 \endgroup
7145 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7146 \ifHy@localanchorname
7147 \let\@currentHref\HyperLocalCurrentHref
7148 \else
7149 \global\let\@currentHref\HyperGlobalCurrentHref
7150 \fi
7151 }

```

\Hy@MakeCurrentHref

```

7152 \def\Hy@MakeCurrentHref#1{%
7153 \edef\HyperLocalCurrentHref{#1}%
7154 \@onelevel@sanitize\HyperLocalCurrentHref
7155 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7156 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7157 \ifHy@localanchorname
7158 \let\@currentHref\HyperLocalCurrentHref
7159 \else
7160 \global\let\@currentHref\HyperGlobalCurrentHref
7161 \fi
7162 }

```

`\Hy@MakeCurrentHrefAuto`

```

7163 \def\Hy@MakeCurrentHrefAuto#1{%
7164   \Hy@GlobalStepCount\Hy@linkcounter
7165   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7166 }

```

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

```

7167 \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 hypertexnames and plainpages) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option pageanchor is set to false.

`\lastpage@putlabel`

```

7168 \Hy@AtBeginDocument{%
7169   \@ifclassloaded{revtex4}{%
7170     \@namedef{ver@lastpage.sty}{1994/06/25}%
7171   }{}%
7172   \@ifpackageloaded{lastpage}{%
7173     \ifHy@pageanchor
7174     \else
7175       \Hy@WarningNoLine{%
7176         The \string\pageref{LastPage} link doesn't work\MessageBreak
7177         with disabled option `pageanchor'%
7178       }%
7179     \fi
7180   \def\lastpage@putlabel{%
7181     \addtocounter{page}{-1}%
7182     \if@filesw
7183       \begingroup
7184       \let\@number\@firstofone
7185       \ifHy@pageanchor
7186       \ifHy@hypertexnames
7187       \ifHy@plainpages
7188         \def\Hy@temp{\arabic{page}}%
7189       \else
7190         \Hy@unicodefalse
7191         \pdfstringdef\Hy@temp{\thepage}%
7192       \fi
7193     \else
7194       \def\Hy@temp{\the\Hy@pagecounter}%
7195     \fi

```



```

7196     \fi
7197     \immediate\write\@auxout{%
7198       \string\newlabel
7199       {LastPage}{\thepage}{\thepage}{\thepage}{\thepage}{\thepage}%
7200       \ifHy@pageanchor page.\Hy@temp\fi}{\thepage}%
7201     }%
7202   \endgroup
7203 \fi
7204 \addtocounter{page}{1}%
7205 }%
7206 \@ifclassloaded{revtex4}{%
7207   \begingroup
7208     \toks@{\expandafter{\lastpage@putlabel}}%
7209     \edef\x{\endgroup
7210       \def\noexpand\lastpage@putlabel{%
7211         \noexpand\stepcounter{page}%
7212         \the\toks@
7213         \noexpand\addtocounter{page}\noexpand\m@ne
7214       }%
7215     }%
7216   \x
7217 }{}%
7218 }{}%
7219 }
7220 \end{package}
7221 \end{check}
7222 \checkpackage{lastpage}[1994/06/25]
7223 \checkcommand\def\lastpage@putlabel{%
7224   \addtocounter{page}{-1}%
7225   \immediate\write\@auxout{%
7226     \string\newlabel{LastPage}{\thepage}{\thepage}{\thepage}{\thepage}%
7227   }%
7228   \addtocounter{page}{1}%
7229 }
7230 \end{check}
7231 \end{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.

```

7232 \def\hypergetref#1{\getrefbykeydefault{#1}{\thepage}}
7233 \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:

```
7234 \@ifpackageloaded{titlesec}{%
7235   \def\ttl@Hy@steplink#1{%
7236     \Hy@MakeCurrentHrefAuto{#1*}%
7237     \edef\ttl@Hy@saveanchor{%
7238       \noexpand\Hy@raisedlink{%
7239         \noexpand\hyper@anchorstart{\@currentHref}%
7240         \noexpand\hyper@anchorend
7241         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7242         \noexpand\ttl@Hy@PatchSaveWrite
7243       }%
7244     }%
7245   }%
7246   \def\ttl@Hy@PatchSaveWrite{%
7247     \begingroup
7248     \toks@{\expandafter{\ttl@savewrite}}%
7249     \edef\x{\endgroup
7250       \def\noexpand\ttl@savewrite{%
7251         \let\noexpand\@currentHref
7252         \noexpand\ttl@Hy@SavedCurrentHref
7253         \the\toks@
7254       }%
7255     }%
7256     \x
7257   }%
7258   \def\ttl@Hy@refstepcounter#1{%
7259     \let\ttl@b\Hy@raisedlink
7260     \def\Hy@raisedlink##1{%
7261       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7262     }%
7263     \refstepcounter{#1}%
7264     \let\Hy@raisedlink\ttl@b
7265   }%
7266 }{}
```

Package titletoc support:

```
7267 \@ifpackageloaded{titletoc}{%
7268   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7269 }{}
```

33 Package varioref support

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

```
7270 \AtBeginDocument{%
```

```

7271 \def\Hy@varioref@undefined{{??}{??}{}}{}{}
7272 \@ifpackageloaded{varioref}{%
7273   \def\vref@pagenum#1#2{%
7274     \@ifundefined{r@#2}{%
7275       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7276     }{}%
7277     \edef#1{\getpagerefnumber{#2}}%
7278   }%
7279 }{}

```

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

```

7280 \def\Hy@varioref@refstepcounter#1{%
7281   \stepcounter{#1}%
7282   \protected@edef\@currentlabel{%
7283     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7284   }%
7285 }
7286 \ifx\refstepcounter\Hy@varioref@refstepcounter
7287   \let\H@refstepcounter\refstepcounter
7288   \let\refstepcounter\Hy@saved@refstepcounter
7289 \fi
7290 }

```

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

```

7291 \@ifpackageloaded{longtable}{%
7292   \begingroup
7293   \def\y{\LT@array}%
7294   \@ifundefined{scr@LT@array}{%
7295     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7296       \def\y{\scr@LT@array}}%
7297   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7298     \expandafter\endgroup
7299     \expandafter\def\y[##1]##2{%
7300       \H@refstepcounter{#1}%
7301       \hyper@makecurrent{table}%
7302       \let\Hy@LT@currentHref\@currentHref
7303       #2\@sharp###4%
7304     }%
7305   }%
7306   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7307 \begingroup
7308 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7309 \endgroup
7310 \def\LT@start{%
7311 #1%
7312 \ifvoid\LT@foot#2\fi
7313 \let\@currentHref\Hy@LT@currentHref
7314 \Hy@raisedlink{%
7315 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7316 }%
7317 #3%
7318 }%
7319 }%
7320 \expandafter\x\LT@start\@nil
7321 }{}

```

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.

```

7322 \let\new@refstepcounter\refstepcounter
7323 \let\H@equation\equation
7324 \let\H@endequation\endequation
7325 \@ifpackageloaded{amsmath}{%
7326 \long\def\Hy@temp{%
7327 \incr@eqnum
7328 \mathdisplay@push
7329 \st@rredfalse \global\@eqnswtrue
7330 \mathdisplay{equation}%
7331 }%
7332 \ifx\Hy@temp\equation
7333 \expandafter\ifx\cename if@fleqn\expandafter\endcsname
7334 \cename iftrue\endcsname
7335 \else
7336 \long\def\equation{%
7337 \mathdisplay@push
7338 \st@rredfalse \global\@eqnswtrue
7339 \mathdisplay{equation}%
7340 \incr@eqnum
7341 }%
7342 \fi
7343 \fi
7344 }{}%
7345 \def\equation{%
7346 \let\refstepcounter\H@refstepcounter

```

```

7347 \H@equation
7348 \@ifundefined{theHequation}{%
7349   \make@stripped@name{\theequation}%
7350   \let\theHequation\newname
7351 }{}%
7352 \hyper@makecurrent{equation}%

```

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

```

7353 \mathopen{%
7354   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7355 }%
7356 \let\refstepcounter\new@refstepcounter
7357 }%
7358 \def\endequation{%
7359   \ifx\Hy@raisedlink\ltx@empty
7360     \hyper@anchorend
7361   \else
7362     \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7363 \fi
7364 \H@endequation
7365 }%
7366 }

```

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.

```

7367 \newif\if@eqnstar
7368 \@eqnstarfalse
7369 \let\H@eqnarray\eqnarray
7370 \let\H@endeqnarray\endeqnarray
7371 \def\eqnarray{%
7372   \let\Hy@reserved@a\relax
7373   \def\@currentHref{}%
7374   \H@eqnarray
7375   \if@eqnstar
7376   \else
7377     \ifx\\\@currentHref\\%
7378     \else
7379       \@ifundefined{theHequation}{%
7380         \make@stripped@name{\theequation}%
7381         \let\theHequation\newname
7382       }{}%
7383       \hyper@makecurrent{equation}%
7384       \mathopen{%
7385         \Hy@raisedlink{%
7386           \hyper@anchorstart{\@currentHref}\hyper@anchorend
7387         }%
7388       }%

```

```

7389 \fi
7390 \fi
7391 }
7392 \def\endeqnarray{%
7393 \H@endeqnarray
7394 }

```

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.

```

7395 \@namedef{eqnarray*}{%
7396 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7397 }
7398 \@namedef{endeqnarray*}{%
7399 \nonumber\endeqnarray\@eqnstarfalse
7400 }

```

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

```

7401 \ltx@ifundefined{subeqnarray}{}{%
7402 \let\H@subeqnarray\subeqnarray
7403 \let\H@endsubeqnarray\endsubeqnarray
7404 \def\subeqnarray{%
7405 \let\Hy@reserved@a\relax
7406 \H@subeqnarray
7407 \@ifundefined{theHequation}{%
7408 \make@stripped@name{\theequation}%
7409 \let\theHequation\newname
7410 }{}%
7411 \hyper@makecurrent{equation}%
7412 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7413 }%
7414 \def\endsubeqnarray{%
7415 \H@endsubeqnarray
7416 }%
7417 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7418 }

```

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

```

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

```

```

7430     \if}\Hy@tempa\else
7431         \xdef\newname{\newname\Hy@tempa}%
7432     \fi
7433 \fi
7434 }%
7435 \endgroup
7436 }

```

Support for amsmath's subequations:

```

7437 \begingroup\expandafter\expandafter\expandafter\endgroup
7438 \expandafter\ifx\csname subequations\endcsname\relax
7439 \else
7440 \let\HyOrg@subequations\subequations
7441 \def\subequations{%
7442     \stepcounter{equation}%
7443     \protected@edef\theHparentequation{%
7444         \ifundefined{theHequation}\theequation\theHequation
7445     }%
7446     \addtocounter{equation}{-1}%
7447     \HyOrg@subequations
7448     \def\theHequation{\theHparentequation\alph{equation}}%
7449     \ignorespaces
7450 }%
7451 \fi

```

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

```

7452 \Hy@AtBeginDocument{%
7453 \ifpackageloaded{cleveref}{%
7454 \let\Hy@savedthm\@thm
7455 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7456 }{%
7457 \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

7458 \def\Hy@temp#1#2#3{%
7459 \ifhmode\unskip\unskip\par\fi
7460 \normalfont
7461 \trivlist
7462 \let\thmheadnl\relax
7463 \let\thm@swap\@gobble
7464 \let\thm@indent\indent % indent
7465 \thm@headfont{\scshape}% heading font small caps
7466 \thm@notefont{\fontseries\mddefault\upshape}%
7467 \thm@headpunct{.}% add period after heading
7468 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7469 \thm@space@setup
7470 #1% style overrides

```

```

7471 \@topsep \thm@preskip          % used by thm head
7472 \@topsepadd \thm@postskip      % used by \@endparenv
7473 \def\@tempa{#2}\ifx\@empty\@tempa
7474   \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7475 \else
7476   \refstepcounter{#2}%
7477   \def\@tempa{%
7478     \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7479  }%
7480 \fi
7481 \@tempa
7482}%
7483 \ifx\Hy@temp\@thm
7484   \def\@thm#1#2#3{%
7485     \ifhmode
7486       \unskip\unskip\par
7487     \fi
7488     \normalfont
7489     \trivlist
7490     \let\thmheadnl\relax
7491     \let\thm@swap\@gobble
7492     \let\thm@indent\indent % indent
7493     \thm@headfont{\scshape}% heading font small caps
7494     \thm@notefont{\fontseries\mddefault\upshape}%
7495     \thm@headpunct{.}% add period after heading
7496     \thm@headsep 5\p@ plus\p@ minus\p@\relax
7497     \thm@space@setup
7498     #1% style overrides
7499     \@topsep \thm@preskip          % used by thm head
7500     \@topsepadd \thm@postskip      % used by \@endparenv
7501     \def\dth@counter{#2}%
7502     \ifx\@empty\dth@counter
7503       \def\@tempa{%
7504         \@oparg{\@begintheorem{#3}{}}}%
7505      }%
7506     \else
7507       \H@refstepcounter{#2}%
7508       \hyper@makecurrent{#2}%
7509       \let\Hy@dth@currentHref\@currentHref
7510       \def\@tempa{%
7511         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7512      }%
7513     \fi
7514     \@tempa
7515  }%
7516 \else
7517   \def\@thm#1#2#3{%
7518     \ifhmode
7519       \unskip\unskip\par
7520     \fi

```



```

7521 \normalfont
7522 \trivlist
7523 \let\thmheadnl\relax
7524 \let\thm@swap\@gobble
7525 \thm@notefont{\fontseries\mddefault\upshape}%
7526 \thm@headpunct{.}% add period after heading
7527 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7528 \thm@space@setup
7529 #1% style overrides
7530 \@topsep \thm@preskip % used by thm head
7531 \@topsepadd \thm@postskip % used by \@endparenv
7532 \def\dtH@counter{#2}%
7533 \ifx\@empty\dtH@counter
7534 \def\@tempa{%
7535 \Oparg{\@begintheorem{#3}{}}{}%
7536 }%
7537 \else
7538 \H@refstepcounter{#2}%
7539 \hyper@makecurrent{#2}%
7540 \let\Hy@dth@currentHref\@currentHref
7541 \def\@tempa{%
7542 \Oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7543 }%
7544 \fi
7545 \@tempa
7546 }%
7547 \fi
7548 \dtH@everypar={%
7549 \@minipagefalse
7550 \global\@newlistfalse
7551 \@noparitemfalse
7552 \if@inlabel
7553 \global\@inlabelfalse
7554 \begingroup
7555 \setbox\z@\lastbox
7556 \ifvoid\z@
7557 \kern-\itemindent
7558 \fi
7559 \endgroup
7560 \ifx\@empty\dtH@counter
7561 \else
7562 \Hy@raisedlink{%
7563 \hyper@anchorstart{%
7564 \ltx@ifundefined{Hy@dth@currentHref}%
7565 \@currentHref\Hy@dth@currentHref
7566 }\hyper@anchorend
7567 }%
7568 \fi
7569 \unhbox\@labels
7570 \fi

```

```

7571 \if@nobreak
7572 \clubpenalty\clubpenalty\@M
7573 \else
7574 \clubpenalty\clubpenalty \everypar{}%
7575 \fi
7576 }%
7577 }%

```

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

```

7578 {%
7579 \let\Hy@savethm\@thm
7580 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7581 }%
7582 }%
7583 }

```

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.

```

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

```

```

7609 \ifHy@nesting
7610 \expandafter\ltx@firstoftwo
7611 \else
7612 \expandafter\ltx@secondoftwo
7613 \fi
7614 {%
7615 \expandafter\hyper@@anchor\expandafter{%
7616 \Hy@footnote@currentHref
7617 }{\ignorespaces #1}%
7618 }{%
7619 \Hy@raisedlink{%
7620 \expandafter\hyper@@anchor\expandafter{%
7621 \Hy@footnote@currentHref
7622 }{\relax}%
7623 }\ignorespaces #1%
7624 }%
7625 }%
7626 }%
7627 \long\def\@footnotetext#1{%
7628 \H@@@footnotetext{%
7629 \ifHy@nesting
7630 \expandafter\ltx@firstoftwo
7631 \else
7632 \expandafter\ltx@secondoftwo
7633 \fi
7634 {%
7635 \expandafter\hyper@@anchor\expandafter{%
7636 \Hy@footnote@currentHref
7637 }{\ignorespaces #1}%
7638 }{%
7639 \Hy@raisedlink{%
7640 \expandafter\hyper@@anchor\expandafter{%
7641 \Hy@footnote@currentHref
7642 }{\relax}%
7643 }%
7644 \let\@currentHref\Hy@footnote@currentHref
7645 \let\@currentlabelname\@empty
7646 \ignorespaces #1%
7647 }%
7648 }%
7649 }%

```

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.

```

7650 \def\@footnotemark{%
7651 \leavevmode
7652 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi

```

```

7653 \stepcounter{Hfootnote}%
7654 \global\let\Hy@saved@currentHref\@currentHref
7655 \hyper@makecurrent{Hfootnote}%
7656 \global\let\Hy@footnote@currentHref\@currentHref
7657 \global\let\@currentHref\Hy@saved@currentHref
7658 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7659 \@makefnmark
7660 \hyper@linkend
7661 \ifhmode\spacefactor\@x@sf\fi
7662 \relax
7663 }%

```

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

```

7664 \ifpackageloaded{tabularx}{%
7665 \let\HyOrg@TX@endtabularx\TX@endtabularx
7666 \def\Hy@tabularx@hook{%
7667 \let\@footnotetext\H@@footnotetext
7668 \let\@footnotemark\H@@footnotemark
7669 \let\@mpfootnotetext\H@@mpfootnotetext
7670 }%
7671 \begingroup
7672 \toks@{\expandafter{\TX@endtabularx}}%
7673 \xdef\Hy@gtemp{%
7674 \noexpand\Hy@tabularx@hook
7675 \the\toks@
7676 }%
7677 \endgroup
7678 \let\TX@endtabularx\Hy@gtemp
7679 }{}%

```

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

```

7680 \ifpackageloaded{longtable}{%
7681 \CheckCommand{\LT@p@ftntext}[1]{%
7682 \edef\@tempa{%
7683 \the\LT@p@ftn
7684 \noexpand\footnotetext[\the\c@footnote]%
7685 }%
7686 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7687 }%
7688 \long\def\LT@p@ftntext#1{%
7689 \edef\@tempa{%
7690 \the\LT@p@ftn
7691 \begingroup
7692 \noexpand\c@footnote=\the\c@footnote\relax
7693 \noexpand\protected\xdef\noexpand\@thefnmark{%
7694 \noexpand\thempfn

```

```

7695     }%
7696     \noexpand\Hy@LT@footnotetext{%
7697       \Hy@footnote@currentHref
7698     }%
7699   }%
7700   \global\LT@p@ftn\expandafter{%
7701     \@tempa{#1}%
7702   \endgroup
7703   }%
7704 }%
7705 \long\def\Hy@LT@footnotetext#1#2{%
7706   \H@@@footnotetext{%
7707     \ifHy@nesting
7708       \hyper@@anchor{#1}{#2}%
7709     \else
7710       \Hy@raisedlink{%
7711         \hyper@@anchor{#1}{\relax}%
7712       }%
7713     \def\@currentHref{#1}%
7714     \let\@currentlabelname\@empty
7715     #2%
7716   \fi
7717   }%
7718 }%
7719 }{}%

```

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

```

7720 \ifpackageloaded{fancyvrb}{%
7721   \def\V@@@footnotetext{%
7722     \insert\footins\bgroup
7723     \csname reset@font\endcsname
7724     \footnotesize
7725     \interlinepenalty\interfootnotelinepenalty
7726     \splittopskip\footnotesep
7727     \splitmaxdepth\dp\strutbox
7728     \floatingpenalty \@MM
7729     \hsize\columnwidth
7730     \@parboxrestore
7731     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7732     \@makefnintext}%
7733   \rule{\z@}{\footnotesep}%
7734   \bgroup
7735   \aftergroup\V@@@footnotetext
7736   \Hy@raisedlink{%
7737     \expandafter\hyper@@anchor\expandafter{%
7738       \Hy@footnote@currentHref
7739     }\relax}%
7740   }%
7741   \let\@currentHref\Hy@footnote@currentHref
7742   \let\@currentlabelname\@empty

```

```

7743 \ignorespaces
7744 }%
7745 }{}%

```

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

```

7746 \def\Hy@temp#1{%
7747 \begingroup
7748 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7749 \endgroup
7750 \@footnotemark
7751 }%
7752 \ifx\Hy@temp\footref
7753 \def\footref#1{%
7754 \begingroup
7755 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7756 \endgroup
7757 \H@@@footnotemark
7758 }%
7759 \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.

```

7760 \let\HyOrg@maketitle\maketitle
7761 \def\maketitle{%
7762 \let\Hy@saved@footnotemark\@footnotemark
7763 \let\Hy@saved@footnotetext\@footnotetext
7764 \let\@footnotemark\H@@@footnotemark
7765 \let\@footnotetext\H@@@footnotetext
7766 \@ifnextchar[\Hy@maketitle@optarg{% ]
7767 \HyOrg@maketitle
7768 \Hy@maketitle@end
7769 }%
7770 }%
7771 \def\Hy@maketitle@optarg[#1]{%
7772 \HyOrg@maketitle[{#1}]%
7773 \Hy@maketitle@end
7774 }%
7775 \def\Hy@maketitle@end{%
7776 \ifx\@footnotemark\H@@@footnotemark
7777 \let\@footnotemark\Hy@saved@footnotemark
7778 \fi
7779 \ifx\@footnotetext\H@@@footnotetext
7780 \let\@footnotetext\Hy@saved@footnotetext
7781 \fi
7782 }%

```

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

```

7783 \def\realfootnote{%

```

```

7784 \ifnextchar[\@xfootnote{%
7785 \stepcounter{\@mpfn}%
7786 \protected@xdef\@thefnmark{\thempfn}%
7787 \H@@footnotemark\H@@footnotetext
7788 }%
7789 }%

7790 \fi
7791 \Hy@DisableOption{hyperfootnotes}

7792 </package>
7793 <*check>
7794 \checklatex
7795 \checkcommand\def\@xfootnotenext[#1]{%
7796 \begingroup
7797 \csname c@\@mpfn\endcsname #1\relax
7798 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7799 \endgroup
7800 \@footnotetext
7801 }
7802 \checkcommand\def\@xfootnotemark[#1]{%
7803 \begingroup
7804 \c@footnote #1\relax
7805 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7806 \endgroup
7807 \@footnotemark
7808 }
7809 \checkcommand\def\@footnotemark{%
7810 \leavevmode
7811 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7812 \@makefnmark
7813 \ifhmode\spacefactor\@x@sf\fi
7814 \relax
7815 }
7816 </check>
7817 <*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.

```

7818 \def\caption{%
7819 \ifx\@captype\@undefined
7820 \latex@error{\noexpand\caption outside float}\@ehd
7821 \expandafter\@gobble
7822 \else
7823 \H@refstepcounter\@captype
7824 \let\Hy@tempa\@caption
7825 \@ifundefined{float@caption}{%

```

```

7826 }{%
7827   \expandafter\ifx\csname @float@c@\@capttype\endcsname
7828     \float@caption
7829     \let\Hy@tempa\Hy@float@caption
7830   \fi
7831 }%
7832 \expandafter\@firstofone
7833 \fi
7834 {\@dblarg{\Hy@tempa\@capttype}}%
7835 }
7836 \long\def\@caption#1[#2]#3{%
7837   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7838     \csname iftrue\endcsname
7839     \global\let\@currentHref\hc@currentHref
7840   \else
7841     \hyper@makecurrent{\@capttype}%
7842   \fi
7843   \@ifundefined{NR@gettitle}{%
7844     \def\@currentlabelname{#2}%
7845   }{%
7846     \NR@gettitle{#2}%
7847   }%
7848   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7849     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7850   }%
7851   \begingroup
7852     \@parboxrestore
7853     \if@minipage
7854       \@setminipage
7855     \fi
7856     \normalsize
7857     \expandafter\ifx\csname if@capstart\expandafter\endcsname
7858       \csname iftrue\endcsname
7859       \global\@capstartfalse
7860       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7861     \else
7862       \@makecaption{\csname fnum@#1\endcsname}{%
7863         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7864   \ifHy@nesting
7865     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7866   \else
7867     \Hy@raisedlink{%
7868       \expandafter\hyper@@anchor\expandafter{%
7869         \@currentHref
7870       }\relax}%
7871   }%
7872   #3%
7873 \fi

```



```

7874    }%
7875    \fi
7876    \par
7877    \endgroup
7878 }

```

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’.

```

7879 \let\Hy@float@caption\@caption
7880 \newcommand{\HyNew@float@makebox}[1]{%
7881   \HyOrg@float@makebox{%
7882     #1\relax
7883     \ifx\Hy@float@currentHref\@undefined
7884     \else
7885       \expandafter\hyper@\@anchor\expandafter{%
7886         \Hy@float@currentHref
7887       }\relax}%
7888     \global\let\Hy@float@currentHref\@undefined
7889   \fi
7890 }%
7891 }%
7892 \ifpackageloaded{float}{%
7893   \def\Hy@float@caption{%
7894     \ifx\Hy@float@currentHref\@undefined
7895       \hyper@makecurrent{\@captive}%
7896       \global\let\Hy@float@currentHref\@currentHref
7897     \else
7898       \let\@currentHref\Hy@float@currentHref
7899     \fi
7900     \float@caption
7901   }%
7902   \let\HyOrg@float@makebox\float@makebox
7903   \let\float@makebox\HyNew@float@makebox
7904 }{}

7905 </package>
7906 <*check>
7907 \checklatex[1999/06/01 - 2000/06/01]
7908 \checkcommand\def\caption{%
7909   \ifx\@captive\@undefined
7910     \@latex@error{\noexpand\caption outside float}\@ehd
7911     \expandafter\@gobble
7912   \else
7913     \refstepcounter\@captive
7914     \expandafter\@firstofone
7915   \fi
7916   {\@dblarg{\@caption\@captive}}%

```

```

7917 }
7918 \checkcommand\long\def\@caption#1[#2]#3{%
7919   \par
7920   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7921     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7922   }%
7923   \begingroup
7924     \@parboxrestore
7925     \if@minipage
7926       \@setminipage
7927     \fi
7928     \normalsize
7929     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7930   \endgroup
7931 }
7932 </check>
7933 <*package>

```

38 Bibliographic references

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

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

```

7934 \def\hyper@natlinkstart#1{%
7935   \Hy@backout{#1}%
7936   \hyper@linkstart{cite}{cite.#1}%
7937   \def\hyper@nat@current{#1}%
7938 }
7939 \def\hyper@natlinkend{%
7940   \hyper@linkend
7941 }
7942 \def\hyper@natlinkbreak#1#2{%
7943   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7944 }
7945 \def\hyper@natanchorstart#1{%
7946   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7947 }
7948 \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.

```

7949 \ltx@ifundefined{NAT@parse}{%
7950   \providecommand*{@extra@binfo}{}%
7951   \providecommand*{@extra@b@citeb}{}%
7952   \def\bibcite#1#2{%
7953     \@newl@bel{b}{#1\@extra@binfo}{%
7954       \hyper@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
7955     }%
7956   }%
7957   \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.”.

```

7958 \let\Hy@bibcite\bibcite
7959 \begingroup
7960   \@ifundefined{bbl@cite@choice}{}{%
7961     \g@addto@macro\bbl@cite@choice{%
7962       \let\bibcite\Hy@bibcite
7963     }%
7964   }%
7965 \endgroup

```

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

```

7966 \providecommand*{\@BIBLABEL}{\@biblabel}%
7967 \def\@lbibitem[#1]#2{%
7968   \@skiphyperreftrue
7969   \H@item[%
7970     \ifx\Hy@raisedlink\@empty
7971       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7972       \@BIBLABEL{#1}%
7973       \hyper@anchorend
7974     \else
7975       \Hy@raisedlink{%
7976         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7977       }%
7978       \@BIBLABEL{#1}%
7979     \fi
7980     \hfill
7981   ]%
7982   \@skiphyperreffalse
7983   \if@filesw
7984     \begingroup
7985       \let\protect\noexpand
7986       \immediate\write\@auxout{%
7987         \string\bibcite{#2}{#1}%
7988       }%
7989     \endgroup
7990   \fi
7991   \ignorespaces
7992 }%

```

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

extra spurious labels

```

7993 \def\@bibitem#1{%
7994 \@skiphyperreftrue\H@item\@skiphyperreffalse
7995 \Hy@raisedlink{%
7996 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7997 }%
7998 \if@filesw
7999 \begingroup
8000 \let\protect\noexpand
8001 \immediate\write\@auxout{%
8002 \string\bibcite{#1}{\the\value{\@listctr}}}%
8003 }%
8004 \endgroup
8005 \fi
8006 \ignorespaces
8007 }%
8008 }{}

8009 \</package>
8010 \<*check>
8011 \checklatex
8012 \checkcommand\def\@lbibitem[#1]#2{%
8013 \item[\@biblabel{#1}\hfill]%
8014 \if@filesw
8015 {%
8016 \let\protect\noexpand
8017 \immediate\write\@auxout{%
8018 \string\bibcite{#2}{#1}%
8019 }%
8020 }%
8021 \fi
8022 \ignorespaces
8023 }
8024 \checkcommand\def\@bibitem#1{%
8025 \item
8026 \if@filesw
8027 \immediate\write\@auxout{%
8028 \string\bibcite{#1}{\the\value{\@listctr}}}%
8029 }%
8030 \fi
8031 \ignorespaces
8032 }
8033 \</check>
8034 \<*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.

```

8035 \ifclassloaded{revtex}{%
8036 \Hy@Info{*** compatibility with revtex **** }%

```

```

8037 \def\revtex@checking#1#2{%
8038   \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8039   \expandafter\def\csname b@#1\endcsname{#2}%
8040   \@SetMaxRnhefLabel{#1}%
8041   \expandafter\let\csname b@#1\endcsname\T@temp
8042 }%

```

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

```

8043 \ifundefined{@CITE}{\def\CITE{\@cite}}}%
8044 \providecommand*{\@extra@b@citeb}{}%
8045 \def\CITE[#1]#2{%
8046   \let\@citea\@empty
8047   \leavevmode
8048   \unskip
8049   $^{}%
8050   \scriptstyle
8051   \@CITE{%
8052     \for\@citeb:=#2\do{%
8053       \@citea
8054       \def\@citea{,\penalty\@m\ }%
8055       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8056       \if@filesw
8057         \immediate\write\@auxout{\string\citation{\@citeb}}%
8058       \fi
8059       \ifundefined{b@\@citeb\extra@b@citeb}{}%
8060       \mbox{\reset@font\bfseries ?}%
8061       \G@refundefinedtrue
8062       \@latex@warning{%
8063         Citation ``\@citeb' on page \thepage \space undefined%
8064       }%
8065     }{%
8066       {\csname b@\@citeb\@extra@b@citeb\endcsname}%
8067     }%
8068   }%
8069 }{#1}%
8070 }$%
8071 }%

```

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.

```

8072 \def\citex[#1]#2{%
8073   \let\@citea\@empty
8074   \@cite{%
8075     \for\@citeb:=#2\do{%
8076       \@citea
8077       \def\@citea{,\penalty\@m\ }%
8078       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8079       \if@filesw
8080         \immediate\write\@auxout{\string\citation{\@citeb}}%

```

```

8081 \fi
8082 \@ifundefined{b@\@citeb\@extra@b@citeb}{%
8083 \mbox{\reset@font\bfseries ?}%
8084 \G@refundefinedtrue
8085 \@latex@warning{%
8086 Citation `\'@citeb' on page \thepage \space undefined%
8087 }%
8088 }{%
8089 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8090 }%
8091 }%
8092 }{#1}%
8093 }%
8094 }{}

```

38.1 Package harvard

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

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

```

8095 \@ifpackageloaded{harvard}{%
8096 \Hy@AtBeginDocument{%
8097 \Hy@Info{*** compatibility with harvard **** }%
8098 \Hy@raiselinksfalse
8099 \def\harvardcite#1#2#3#4{%
8100 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8101 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8102 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8103 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8104 }%
8105 \def\HAR@citetoaux#1{%
8106 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8107 \ifHy@backref
8108 \ifx\@empty\@currentlabel
8109 \else
8110 \@bsphack
8111 \if@filesw
8112 \protected@write\@auxout{}{%
8113 \string\@writefile{brf}{%
8114 \string\backcite{#1}{%
8115 {\thepage}{\@currentlabel}{\@currentHref}%
8116 }%
8117 }%
8118 }%
8119 \fi

```

```

8120     \@esphack
8121     \fi
8122   \fi
8123 }%
8124 \def\harvarditem{%
8125   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8126 }%
8127 \def\@harvarditem[#1]#2#3#4#5\par{%
8128   \item[]%
8129   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8130   \if@filesw
8131     \begingroup
8132     \def\protect##1{\string ##1\space}%
8133     \ifthenelse{equal{#1}{\null}}{%
8134       {\def\next{{#4}{#2}{#2}{#3}}}%
8135       {\def\next{{#4}{#2}{#1}{#3}}}%
8136       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8137     \endgroup
8138   \fi
8139   \protect\hspace*{-\labelwidth}%
8140   \protect\hspace*{-\labelsep}%
8141   \ignorespaces
8142   #5%
8143   \ifHy@backref
8144     \newblock
8145     \backref{\csname br@#4\endcsname}%
8146   \fi
8147   \par
8148 }%

```

\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:

```

8149 \long\def\HAR@checkcitations#1#2#3#4{%
8150   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8151   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8152     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8153     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8154       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8155       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8156         \else
8157           \@tempwattrue
8158         \fi
8159       \else
8160         \@tempwattrue
8161       \fi
8162     \else
8163       \@tempwattrue
8164     \fi
8165   }%

```

```
8166 }%
```

```
8167 }{}
```

38.2 Package chicago

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

```
8168 \@ifpackageloaded{chicago}{%
```

```
\citeN
```

```
8169 \def\citeN{%
```

```
8170 \def\@citesepen{-1000}%
```

```
8171 \def\@cite##1##2{##1}%
```

```
8172 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
```

```
8173 \@citedata@opt
```

```
8174 }%
```

```
\shortciteN
```

```
8175 \def\shortciteN{%
```

```
8176 \def\@citesepen{-1000}%
```

```
8177 \def\@cite##1##2{##1}%
```

```
8178 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
```

```
8179 \@citedata@opt
```

```
8180 }%
```

```
\@citedata@opt
```

```
8181 \def\@citedata@opt{%
```

```
8182 \let\@cite@opt\@empty
```

```
8183 \@ifnextchar [{%
```

```
8184 \@tempswatrue
```

```
8185 \@citedatax@opt
```

```
8186 }{%
```

```
8187 \@tempswafalse
```

```
8188 \@citedatax[]%
```

```
8189 }%
```

```
8190 }%
```

```
\@citedatax@opt
```

```
8191 \def\@citedatax@opt[#1]{%
```

```
8192 \def\@cite@opt{, #1}%
```

```
8193 \@citedatax[{#1}]%
```

```
8194 }%
```

```
8195 }{}
```


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.

```

8196 \ltx@ifclassloaded{slides}{%
8197   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8198   \def\Hy@PageAnchorSlidesPlain{%
8199     \advance\c@page\ltx@one
8200     \edef\Hy@TempPageAnchor{%
8201       \noexpand\hyper@@anchor{%
8202         page.\the\c@slide.\the\c@overlay.\the\c@note%
8203         \ifnum\c@page=\ltx@one
8204           \else
8205             .\the\c@page
8206           \fi
8207         }%
8208       }%
8209     \advance\c@page-\ltx@one
8210   }%
8211   \def\Hy@PageAnchorSlide{%
8212     \advance\c@page\ltx@one
8213     \ifnum\c@page>\ltx@one
8214       \ltx@ifundefined{theHpage}{%
8215         \protected@edef\Hy@TheSlideOptionalPage{%
8216           \Hy@SlidesFormatOptionalPage{\thepage}%
8217         }%
8218       }{%
8219         \protected@edef\Hy@TheSlideOptionalPage{%
8220           \Hy@SlidesFormatOptionalPage{\theHpage}%
8221         }%
8222       }%
8223     \else
8224       \def\Hy@TheSlideOptionalPage{}%
8225     \fi
8226     \advance\c@page-\ltx@one
8227     \pdfstringdef\@the@H@page{%
8228       \csname
8229         the%
8230         \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8231         \Hy@SlidesPage
8232       \endcsname
8233     \Hy@TheSlideOptionalPage
8234   }%
8235   \ltx@gobblethree
8236 }%
```

```

8237 \def\Hy@SlidesPage{slide}%
8238 \g@addto@macro\slide{%
8239   \def\Hy@SlidesPage{slide}%
8240 }%
8241 \g@addto@macro\overlay{%
8242   \def\Hy@SlidesPage{overlay}%
8243 }%
8244 \g@addto@macro\note{%
8245   \def\Hy@SlidesPage{note}%
8246 }%
8247 }{%
8248 \def\Hy@PageAnchorSlidesPlain{}%
8249 \def\Hy@PageAnchorSlide{}%
8250 }
8251 \def\Hy@EveryPageAnchor{%
8252   \Hy@DistillerDestFix
8253   \ifHy@pageanchor
8254     \ifHy@hypertextnames
8255       \ifHy@plainpages
8256         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8257         \Hy@PageAnchorSlidesPlain
8258       \else
8259         \begingroup
8260           \let\@number\@firstofone
8261           \Hy@unicodedefalse
8262           \Hy@PageAnchorSlide
8263           \pdfstringdef\@the@H@page{\thepage}%
8264         \endgroup
8265         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8266         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8267       \fi
8268     \else
8269       \Hy@GlobalStepCount\Hy@pagecounter
8270       \def\Hy@TempPageAnchor{%
8271         \hyper@@anchor{page.\the\Hy@pagecounter}%
8272       }%
8273     \fi
8274   \vbox to 0pt{%
8275     \kern\voffset
8276     \kern\topmargin
8277     \kern-1bp\relax
8278     \hbox to 0pt{%
8279       \kern\hoffset
8280       \kern\ifodd\value{page}%
8281         \oddsidemargin
8282       \else
8283         \evensidemargin
8284       \fi
8285       \kern-1bp\relax
8286       \Hy@TempPageAnchor\relax

```

```

8287     \hss
8288   }%
8289   \vss
8290 }%
8291 \fi
8292 }
8293 \g@addto@macro\Hy@EveryPageBoxHook{%
8294   \Hy@EveryPageAnchor
8295 }

```

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.

```

8296 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8297 % line in the \textt{toc}file.
8298 %   \begin{macrocode}
8299 \providecommand\protected@file@percent{}

8300 \def\addcontentsline#1#2#3{% toc extension, type, tag
8301   \begingroup
8302     \let\label\@gobble
8303     \ifx\@currentHref\@empty
8304       \Hy@Warning{%
8305         No destination for bookmark of \string\addcontentsline,%
8306         \MessageBreak destination is added%
8307       }%
8308     \phantomsection
8309   \fi
8310   \expandafter\ifx\csname toplevel@#2\endcsname\relax
8311     \begingroup
8312       \def\Hy@tempa{#1}%
8313       \ifx\Hy@tempa\Hy@bookmarkstype
8314         \Hy@WarningNoLine{%
8315           bookmark level for unknown #2 defaults to 0%
8316         }%
8317       \else
8318         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8319       \fi
8320     \endgroup
8321     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8322   \fi
8323   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8324   \Hy@writebookmark{\csname the#2\endcsname}%
8325     {#3}%
8326     {\@currentHref}%
8327     {\Hy@toclevel}%
8328     {#1}%

```

```

8329 \ifHy@verbose
8330 \begingroup
8331 \def\Hy@tempa{#3}%
8332 \@onelevel@sanitize\Hy@tempa
8333 \let\temp@online\on@line
8334 \let\on@line\@empty
8335 \Hy@Info{%
8336   bookmark\temp@online:\MessageBreak
8337   thecounter {\csname the#2\endcsname}\MessageBreak
8338   text {\Hy@tempa}\MessageBreak
8339   reference {\@currentHref}\MessageBreak
8340   toplevel {\Hy@toclevel}\MessageBreak
8341   type {#1}%
8342 }%
8343 \endgroup
8344 \fi
8345 \addtocontents{#1}{%
8346 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8347 }%
8348 \endgroup
8349 }

```

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

```

8350 \def\contentsline#1#2#3#4{%
8351 \begingroup
8352 \Hy@safe@activetrue
8353 \edef\x{\endgroup
8354 \def\noexpand\Hy@tocdestname{#4}%
8355 }\x
8356 \ifx\Hy@tocdestname\ltx@empty
8357 \csname l@#1\endcsname{#2}{#3}%
8358 \else
8359 \ifcase\Hy@linktoc % none
8360 \csname l@#1\endcsname{#2}{#3}%
8361 \or % section
8362 \csname l@#1\endcsname{%
8363 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8364 }{#3}%
8365 \or % page
8366 \def\Hy@temp{#3}%
8367 \ifx\Hy@temp\ltx@empty
8368 \csname l@#1\endcsname{#2}{#3}%
8369 \else
8370 \csname l@#1\endcsname{{#2}}{%
8371 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8372 }%
8373 \fi
8374 \else % all

```

```

8375 \def\Hy@temp{#3}%
8376 \ifx\Hy@temp\ltx@empty
8377 \csname l@#1\endcsname{%
8378 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8379 }{}%
8380 \else
8381 \csname l@#1\endcsname{%
8382 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8383 }{}%
8384 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8385 }%
8386 \fi
8387 \fi
8388 \fi
8389 }

8390 </package>
8391 <*check>
8392 \checklatex
8393 \checkcommand\def\addcontentsline#1#2#3{%
8394 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8395 }
8396 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8397 </check>
8398 <*package>

```

41 New counters

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

```

8399 \let\H@definecounter\@definecounter
8400 \def\@definecounter#1{%
8401 \H@definecounter{#1}%
8402 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8403 }

```

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.

```

8404 \let\H@newctr\@newctr
8405 \def\@newctr#1[#2]{%
8406 \H@newctr#1[{#2}]%
8407 \expandafter\gdef\csname theH#1\endcsname{%
8408 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8409 }%
8410 }

```

42 AMS¹TeX 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.

```

8411 \@ifpackageloaded{amsmath}{%
8412   \def\Hy@make@anchor{%
8413     \Hy@MakeCurrentHrefAuto{AMS}%
8414     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8415   }%
8416   \def\Hy@make@df@tag@@#1{%
8417     \gdef\df@tag{%
8418       \maketag@@@{\Hy@make@anchor#1}%
8419       \def\@currentlabel{#1}%
8420     }%
8421   }%
8422   \def\Hy@make@df@tag@@@#1{%
8423     \gdef\df@tag{%
8424       \tagform@{\Hy@make@anchor#1}%
8425       \toks@{\xp{\p@equation{#1}}}%
8426       \edef\@currentlabel{\the\toks@}%
8427     }%
8428   }%
8429   \let\HyOrg@make@df@tag@@\make@df@tag@@
8430   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8431   \let\make@df@tag@@\Hy@make@df@tag@@
8432   \let\make@df@tag@@@\Hy@make@df@tag@@@
8433 }{}

```

Only play with `\seteqlebal` if we are using pdf²tex. Other drivers cause problems; requested by Michael Downes (AMS).

```

8434 \@ifpackagewith{hyperref}{pdf2tex}{%
8435   \let\H@seteqlabel\@seteqlabel
8436   \def\@seteqlabel#1{%
8437     \H@seteqlabel{#1}%
8438     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8439     \Hy@raisedlink{%
8440       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8441     }%
8442   }%
8443 }{}

```

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.

```

8444 \let\HyOrg@addtoreset\@addtoreset
8445 \def\@addtoreset#1#2{%
8446   \HyOrg@addtoreset{#1}{#2}%
8447   \expandafter\xdef\csname theH#1\endcsname{%
8448     \expandafter\noexpand
8449     \csname the\@ifundefined{theH#2}{}H#2\endcsname
8450     .\noexpand\the\noexpand\value{#1}%
8451   }%
8452 }

```

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

```

8453 </package>
8454 <*check>
8455 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8456 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8457   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8458     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8459       \@addtoreset{#2}{#3}%
8460       \@xp\xdef\csname the#2\endcsname{%
8461         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8462       }%
8463     }%
8464   }%
8465 }%
8466 </check>
8467 <*package>
8468 \@ifpackageloaded{amsmath}{%
8469   \@ifpackagelater{amsmath}{1999/12/14}{%
8470     \renewcommand*\numberwithin[3][\arabic]{%
8471       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8472         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8473           \HyOrg@addtoreset{#2}{#3}%
8474           \@xp\xdef\csname the#2\endcsname{%
8475             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8476           }%
8477         \@xp\xdef\csname theH#2\endcsname{%
8478           \@xp\@nx

```

```

8479      \csname the\@ifundefined{theH#3}{H#3\endcsname
8480      .\@nx#1{#2}%
8481      }%
8482      }%
8483      }%
8484      }%
8485      }{%
8486      \Hy@WarningNoLine{%
8487      \string\numberwithin\space of package `amsmath' %
8488      only fixed\MessageBreak
8489      for version 2000/06/06 v2.12 or newer%
8490      }%
8491      }%
8492      }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8493 \ifHy@hyperfigures
8494 \let\Hy@Gin@setfile\Gin@setfile
8495 \def\Gin@setfile#1#2#3{%
8496 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8497 }%
8498 \fi
8499 \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.

```

8500 \ifHy@hyperindex
8501 \def\HyInd@ParenLeft{({}%
8502 \def\HyInd@ParenRight{)}}%
8503 \def\hyperindexformat#1#2{%
8504 \let\HyOrg@hyperpage\hyperpage
8505 \let\hyperpage\@firstofone
8506 #1{\HyOrg@hyperpage{#2}}%
8507 \let\hyperpage\HyOrg@hyperpage
8508 }%

```



```

8509 \Hy@nextfalse
8510 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8511 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8512 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8513 \begingroup
8514 \lccode`\|=\expandafter`\HyInd@EncapChar\relax
8515 \lccode`\/=\|\relax
8516 \lowercase{\endgroup
8517 \ifHy@next
8518 \let\HyInd@org@wrindex\@wrindex
8519 \def\@wrindex#1#2{\HyInd@org@wrindex{#1}#2||\}%
8520 \def\HyInd@org@wrindex#1#2|#3|#4\{\%
8521 \ifx\|#3\%
8522 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8523 \else
8524 \HyInd@org@wrindex{#1}{#2}#3\%
8525 \fi
8526 }%
8527 \def\HyInd@org@wrindex#1#2#3#4\{\%
8528 \def\Hy@temp@A{#3}%
8529 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8530 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8531 \relax
8532 \HyInd@org@wrindex{#1}{%
8533 #2|hyperindexformat{/#3#4}%
8534 }%
8535 \else
8536 \ifx\|#4\%
8537 \ifx\Hy@temp@A\HyInd@ParenRight
8538 \HyInd@org@wrindex{#1}{#2|#3}%
8539 \else
8540 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8541 \fi
8542 \else
8543 \HyInd@org@wrindex{#1}{%
8544 #2|#3hyperindexformat{/#4}%
8545 }%
8546 \fi
8547 \fi
8548 }%
8549 \else
8550 \def\@wrindex#1{\@wrindex#1||\}%
8551 \def\@wrindex#1|#2|#3\{\%
8552 \if@filesw
8553 \ifx\|#2\%
8554 \protected@write\@indexfile{}\%
8555 \string\indexentry{#1|hyperpage}{\thepage}%
8556 }%
8557 \else
8558 \HyInd@org@wrindex{#1}#2\%

```

```

8559     \fi
8560 \fi
8561 \endgroup
8562 \@esphack
8563 }%
8564 \def\HyInd@@@wrindex#1#2#3\{\{%
8565 \def\Hy@temp@A{#2}%
8566 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8567 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8568 \relax
8569 \protected@write\@indexfile{\{%
8570 \string\indexentry{%
8571 #1|hyperindexformat{/#2#3}%
8572 }\{\thepage}%
8573 }%
8574 \else
8575 \ifx\#3\%
8576 \ifx\Hy@temp@A\HyInd@ParenRight
8577 \HyInd@DefKey{#1}%
8578 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8579 \let\Hy@temp\ltx@empty
8580 }\%
8581 \expandafter\let\expandafter\Hy@temp
8582 \csname HyInd@(\HyInd@key)\endcsname
8583 }%
8584 \protected@write\@indexfile{\{%
8585 \string\indexentry{#1|#2\Hy@temp}\{\thepage}%
8586 }%
8587 \else
8588 \protected@write\@indexfile{\{%
8589 \string\indexentry{#1|#2hyperpage}\{\thepage}%
8590 }%
8591 \HyInd@DefKey{#1}%
8592 \expandafter
8593 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8594 hyperpage%
8595 }%
8596 \fi
8597 \else
8598 \protected@write\@indexfile{\{%
8599 \string\indexentry{%
8600 #1|#2hyperindexformat{/#3}%
8601 }\{\thepage}%
8602 }%
8603 \ifx\Hy@temp@A\HyInd@ParenLeft
8604 \HyInd@DefKey{#1}%
8605 \expandafter
8606 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8607 hyperindexformat{/#3}%
8608 }%

```

```

8609     \fi
8610     \fi
8611     \fi
8612   }%
8613   \def\HyInd@DefKey#1{%
8614     \begingroup
8615     \let\protect\@unexpandable@protect
8616     \edef\Hy@temp{#1}%
8617     \ltx@onelevel@sanitize\Hy@temp
8618     \global\let\HyInd@key\Hy@temp
8619   \endgroup
8620   }%
8621   \fi
8622 }%
8623 \fi
8624 \Hy@DisableOption{hyperindex}
8625 \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.

```

8626 \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.

```

8627 \def\hyperpage#1{%
8628   \HyInd@hyperpage#1\nohyperpage{}\@nil
8629 }
8630 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8631   \HyInd@@hyperpage{#1}%
8632   #2%
8633   \def\Hy@temp{#3}%
8634   \ifx\Hy@temp\@empty
8635     \else
8636       \ltx@ReturnAfterFi{%
8637         \HyInd@hyperpage#3\@nil
8638       }%
8639     \fi
8640 }
8641 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8642 \def\@hyperpage#1--#2--#3\\\{%
8643   \ifx\#2\\\%
8644     \@commahyperpage{#1}%
8645   \else
8646     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8647   \fi
8648 }
8649 \def\@commahyperpage#1{\@commahyperpage#1, \}
8650 \def\@commahyperpage#1, #2,#3\\\{%
8651   \ifx\#2\\\%

```

```

8652 \HyInd@pagelink{#1}%
8653 \else
8654 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8655 \fi
8656 }

```

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

```

8657 \def\HyInd@pagelink#1{%
8658 \begingroup
8659 \toks@={}%
8660 \HyInd@removespaces#1 \@nil
8661 \endgroup
8662 }
8663 \def\HyInd@removespaces#1 #2\@nil{%
8664 \toks@=\expandafter{\the\toks@#1}%
8665 \ifx\#2\%
8666 \edef\x{\the\toks@}%
8667 \ifx\x\@empty
8668 \else
8669 \hyperlink{page.\the\toks@}{\the\toks@}%
8670 \fi
8671 \else
8672 \ltx@ReturnAfterFi{%
8673 \HyInd@removespaces#2\@nil
8674 }%
8675 \fi
8676 }

```

45 Compatibility with foiltex

```

8677 \@ifclassloaded{foils}{%
8678 \providecommand*\ext@table{lot}%
8679 \providecommand*\ext@figure{lof}%
8680 }{}

```

46 Compatibility with seminar slide package

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

```

8681 \@ifclassloaded{seminar}{%
8682 \Hy@seminarslidestrue
8683 \providecommand\theHslide{\arabic{slide}}%
8684 }{%
8685 \Hy@seminarslidesfalse
8686 }
8687 \@ifpackageloaded{slidesec}{%
8688 \providecommand\theHslidesection {\arabic{slidesection}}%
8689 \providecommand\theHslidesubsection{%

```

```

8690 \theHslidesection.\arabic{slidesubsection}%
8691 }%
8692 \def\slide@heading[#1]#2{%
8693 \H@refstepcounter{slidesection}%
8694 \@addtoreset{slidesubsection}{slidesection}%
8695 \addtocontents{los}{%
8696 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8697 {\@SCTR}{slideheading.\theslidesection}%
8698 }%
8699 \def\Hy@tempa{#2}%
8700 \ifx\Hy@tempa\@empty
8701 \else
8702 {%
8703 \edef\@currentlabel{%
8704 \csname p@slidesection\endcsname\theslidesection
8705 }%
8706 \makeslideheading{#2}%
8707 }%
8708 \fi
8709 \gdef\theslideheading{#1}%
8710 \gdef\theslidesubheading{}%
8711 \ifHy@bookmarksnumbered
8712 \def\Hy@slidetitle{\theslidesection\space #1}%
8713 \else
8714 \def\Hy@slidetitle{#1}%
8715 \fi
8716 \ifHy@hypertextnames
8717 \ifHy@naturalnames
8718 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8719 \Hy@writebookmark
8720 {\theslidesection}%
8721 {\Hy@slidetitle}%
8722 {slideheading.\theslidesection}%
8723 {1}%
8724 {toc}%
8725 \else
8726 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8727 \Hy@writebookmark
8728 {\theslidesection}%
8729 {\Hy@slidetitle}%
8730 {slideheading.\theHslidesection}%
8731 {1}%
8732 {toc}%
8733 \fi
8734 \else
8735 \Hy@GlobalStepCount\Hy@linkcounter
8736 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8737 \Hy@writebookmark
8738 {\theslidesection}%
8739 {\Hy@slidetitle}%

```

```

8740     {slideheading.\the\Hy@linkcounter}%
8741     {1}%
8742     {toc}%
8743   \fi
8744 }%
8745 \def\slide@subheading[#1]#2{%
8746   \H@refstepcounter{slidesubsection}%
8747   \addtocontents{los}{%
8748     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8749     {\@SCTR}{slideheading.\theslidesubsection}%
8750   }%
8751   \def\Hy@tempa{#2}%
8752   \ifx\Hy@tempa\@empty
8753   \else
8754     {%
8755       \edef\@currentlabel{%
8756         \csname p@slidesubsection\endcsname\theslidesubsection
8757       }%
8758       \makeslidesubheading{#2}%
8759     }%
8760   \fi
8761   \gdef\theslidesubheading{#1}%
8762   \ifHy@bookmarksnumbered
8763     \def\Hy@slidetitle{\theslidesubsection\space #1}%
8764   \else
8765     \def\Hy@slidetitle{#1}%
8766   \fi
8767   \ifHy@hypertextnames
8768     \ifHy@naturalnames
8769       \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8770       \Hy@writebookmark
8771         {\theslidesubsection}%
8772         {\Hy@slidetitle}%
8773         {slideheading.\theslidesubsection}%
8774         {2}%
8775         {toc}%
8776     \else
8777       \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8778       \Hy@writebookmark
8779         {\theslidesubsection}%
8780         {\Hy@slidetitle}%
8781         {slideheading.\theHslidesubsection}%
8782         {2}%
8783         {toc}%
8784     \fi
8785   \else
8786     \Hy@GlobalStepCount\Hy@linkcounter
8787     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8788     \Hy@writebookmark
8789       {\theslidesubsection}%

```

```

8790     {\Hy@slidetitle}%
8791     {slideheading.\the\Hy@linkcounter}%
8792     {1}%
8793     {toc}%
8794   \fi
8795 }%
8796 \providecommand*{\listslidenamename}{List of Slides}%
8797 \def\listofslides{%
8798   \section*{%
8799     \listslidenamename
8800     \@mkboth{%
8801       \expandafter\MakeUppercase\listslidenamename
8802     }{%
8803       \expandafter\MakeUppercase\listslidenamename
8804     }%
8805   }%
8806   \def\l@slide##1##2##3##4{%
8807     \slide@undottedcline{%
8808       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8809     }{}%
8810   }%
8811   \let\l@subslide\l@slide
8812   \@startlos
8813 }%
8814 \def\slide@contents{%
8815   \def\l@slide##1##2##3##4{%
8816     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8817   }%
8818   \let\l@subslide\@gobblefour
8819   \@startlos
8820 }%
8821 \def\Slide@contents{%
8822   \def\l@slide##1##2##3##4{%
8823     \ifcase\lslide@flag
8824       \message{##1 ** \the\c@slidesection}%
8825     \ifnum##1>\c@slidesection
8826       \def\lslide@flag{1}%
8827     {%
8828       \large
8829       \slide@ccline{%
8830         \slidenumberline{$\Rightarrow\bullet$}%
8831         {\hyperlink{##4}{##2}}%
8832       }{##3}%
8833     }%
8834   \else
8835     {%
8836       \large
8837       \slide@ccline{%
8838         \slidenumberline{$\surd\;\bullet$}%
8839         {\hyperlink{##4}{##2}}%

```

```

8840     }{##3}%
8841     }%
8842     \fi
8843   \or
8844     \def\lslide@flag{2}%
8845     {%
8846       \large
8847       \slide@cline{%
8848         \slidenumberline{$\bullet$}%
8849         {\hyperlink{##4}{##2}}}%
8850     }{##3}%
8851     }%
8852   \or
8853     {%
8854       \large
8855       \slide@cline{%
8856         \slidenumberline{$\bullet$}%
8857         {\hyperlink{##4}{##2}}}%
8858     }{##3}%
8859     }%
8860   \fi
8861 }%
8862 \def\l@subslide##1##2##3##4{%
8863   \ifnum\lslide@flag=1 %
8864     \undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
8865   \fi
8866 }%
8867 \def\lslide@flag{0}%
8868 \@startlos
8869 }%
8870 }{}

```

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.)

```

8871 \ifHy@texht
8872   \expandafter\endinput
8873 \fi
8874 \let\real@setref\@setref
8875 \def\@setref#1#2#3{% csname, extract group, refname
8876   \ifx#1\relax
8877     \protect\G@refundefinedtrue
8878     \nfss@text{\reset@font\bfseries ??}%
8879     \@latex@warning{%
8880       Reference `#3' on page \thepage \space undefined%
8881     }%
8882   \else
8883     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8884   \fi
8885 }

```


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

```

8886 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8887   \begingroup
8888   \toks0={\hyper@@link{#5}{#4}}%
8889   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8890   \edef\x{\endgroup
8891     \the\toks0 {\the\toks1 }%
8892   }%
8893   \x
8894 }
8895 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8896   \ifx#1\relax
8897     \protect\G@refundefinedtrue
8898     \nfss@text{\reset@font\bfseries ??}%
8899     \@latex@warning{%
8900       Reference `#3' on page \thepage \space undefined%
8901     }%
8902   \else
8903     \protect\hyper@@link
8904     {\expandafter\@fifthoffive#1}%
8905     {page.\expandafter\@secondoffive#1}%
8906     {\expandafter\@secondoffive#1}%
8907   \fi
8908 }
8909 </package>
8910 <*check>
8911 \checklatex
8912 \checkcommand\def\@setref#1#2#3{%
8913   \ifx#1\relax
8914     \protect\G@refundefinedtrue
8915     \nfss@text{\reset@font\bfseries ??}%
8916     \@latex@warning{%
8917       Reference `#3' on page \thepage\space undefined%
8918     }%
8919   \else
8920     \expandafter#2#1\null
8921   \fi
8922 }
8923 </check>
8924 <*package>

```

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

```

8925 \def\HyRef@StarSetRef#1{%
8926   \begingroup
8927   \Hy@safe@activetrue
8928   \let\protect\@unexpandableprotect
8929   \edef\x{#1}%

```

```

8930 \@onelevel@sanitize\x
8931 \edef\x{\endgroup
8932   \noexpand\HyRef@@StarSetRef
8933   \expandafter\noexpand\csname r@\x\endcsname{\x}%
8934 }%
8935 \x
8936 }
8937 \def\HyRef@@StarSetRef#1#2#3{%
8938   \ifx#1\@undefined
8939     \let#1\relax
8940   \fi
8941   \real@setref#1#3{#2}%
8942 }
8943 \def\@refstar#1{%
8944   \HyRef@StarSetRef{#1}\@firstoffive
8945 }
8946 \def\@pagerefstar#1{%
8947   \HyRef@StarSetRef{#1}\@secondoffive
8948 }
8949 \def\@namerefstar#1{%
8950   \HyRef@StarSetRef{#1}\@thirdoffive
8951 }
8952
8953 \Hy@AtBeginDocument{%
8954   \@ifpackageloaded{varioref}{%
8955     \def\@Refstar#1{%
8956       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8957     }%
8958     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8959       \MakeUppercase#1%
8960     }%
8961     \DeclareRobustCommand*\Ref*{%
8962       \@ifstar\@Refstar\HyRef@Ref
8963     }%
8964     \def\HyRef@Ref#1{%
8965       \hyperref[{#1}]{\Ref*{#1}}%
8966     }%

```

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

```

8967 %FMi
8968 \ifdefined\vp@gerefstar
8969 \renewcommand\Vref@star[2][]{%
8970   \begingroup
8971     \let\T@pageref\@pagerefstar
8972     \Ref*{#2}
8973     \vpageref[#1]{#2}%
8974   \endgroup
8975 }%
8976 \renewcommand\Vr@f[2][]{%
8977   \begingroup

```

```

8978 \let\T@pageref\@pagerefstar
8979 \hyperref[{#2}]{%
8980 \Ref*{#2}
8981 \vpageref[#1]{#2}%
8982 }%
8983 \endgroup
8984 }%
8985 \renewcommand\vr@f[2][]{%
8986 \begingroup
8987 \let\T@pageref\@pagerefstar
8988 \hyperref[{#2}]{%
8989 \ref*{#2}
8990 \vpageref[#1]{#2}%
8991 }%
8992 \endgroup
8993 }%
8994 \renewcommand\vref@star[2][]{%
8995 \begingroup
8996 \let\T@pageref\@pagerefstar
8997 \ref*{#2}
8998 \vpageref[#1]{#2}%
8999 \endgroup
9000 }%
old varioref:
9001 \else
9002 \def\Vr@f#1{%
9003 \leavevmode\unskip\vref@space
9004 \hyperref[{#1}]{%
9005 \Ref*{#1}%
9006 \let\vref@space\nobreakspace
9007 \@vpageref[\unskip]{#1}%
9008 }%
9009 }%
9010 \def\vr@f#1{%
9011 \leavevmode\unskip\vref@space
9012 \begingroup
9013 \let\T@pageref\@pagerefstar
9014 \hyperref[{#1}]{%
9015 \ref*{#1}%
9016 \vpageref[\unskip]{#1}%
9017 }%
9018 \endgroup
9019 }%
9020 \fi
9021 %FMi -end mod
9022 }{}%
9023 }
9024
9025 \DeclareRobustCommand*\autopageref{%

```

```

9026 \@ifstar{%
9027   \HyRef@autopagerefname\pageref*%
9028 } \HyRef@autopageref
9029 }
9030 \def\HyRef@autopageref#1{%
9031   \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
9032 }
9033 \def\HyRef@autopagerefname{%
9034   \ltx@ifundefined{pageautorefname}{%
9035     \ltx@ifundefined{pagename}{%
9036       \Hy@Warning{No autoref name for `page'}%
9037     }{%
9038       \pagename\nobreakspace
9039     }%
9040   }{%
9041     \pageautorefname\nobreakspace
9042   }%
9043 }

```

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

```

9044 \DeclareRobustCommand*\autoref{%
9045   \leavevmode
9046   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9047 }
9048 \def\HyRef@autoref#1#2{%
9049   \begingroup
9050   \Hy@safe@activetrue
9051   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9052   \endgroup
9053 }
9054 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9055   \HyRef@ShowKeysRef{#2}%
9056   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9057   \edef\HyRef@thisref{%
9058     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9059   }%
9060   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9061   \Hy@safe@activesfalse
9062   #3{%
9063     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9064   }{%
9065     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9066   }{%
9067     \HyRef@currentHtag
9068     \expandafter\@firstoffive#1\@empty\@empty\@empty
9069     \null
9070   }%
9071   \else
9072     \protect\G@refundefinedtrue

```

```

9073 \nfss@text{\reset@font\bfseries ??}%
9074 \@latex@warning{%
9075   Reference `#2' on page \thepage\space undefined%
9076 }%
9077 \fi
9078 }
9079 \def\HyRef@testreftype#1.#2\{\%
9080 \ltx@ifundefined{#1autorefname}{%
9081 \ltx@ifundefined{#1name}{%
9082 \HyRef@StripStar#1\*\@nil{#1}%
9083 \ltx@ifundefined{\HyRef@name autorefname}{%
9084 \ltx@ifundefined{\HyRef@name name}{%
9085 \def\HyRef@currentHtag{}%
9086 \Hy@Warning{No autoref name for `#1'}%
9087 }{%
9088 \edef\HyRef@currentHtag{%
9089 \expandafter\noexpand\csname\HyRef@name name\endcsname
9090 \noexpand~%
9091 }%
9092 }%
9093 }{%
9094 \edef\HyRef@currentHtag{%
9095 \expandafter\noexpand
9096 \csname\HyRef@name autorefname\endcsname
9097 \noexpand~%
9098 }%
9099 }%
9100 }{%
9101 \edef\HyRef@currentHtag{%
9102 \expandafter\noexpand\csname#1name\endcsname
9103 \noexpand~%
9104 }%
9105 }%
9106 }{%
9107 \edef\HyRef@currentHtag{%
9108 \expandafter\noexpand\csname#1autorefname\endcsname
9109 \noexpand~%
9110 }%
9111 }%
9112 }
9113 \def\HyRef@StripStar#1*\#2\@nil#3{%
9114 \def\HyRef@name{#2}%
9115 \ifx\HyRef@name\HyRef@CaseStar
9116 \def\HyRef@name{#1}%
9117 \else
9118 \def\HyRef@name{#3}%
9119 \fi
9120 }
9121 \def\HyRef@CaseStar{*\\}
9122 \def\HyRef@currentHtag{

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```
9123 \let\HyRef@ShowKeysRef\@gobble
9124 \def\HyRef@ShowKeysInit{%
9125   \begingroup\expandafter\expandafter\expandafter\endgroup
9126   \expandafter\ifx\csname SK@@label\endcsname\relax
9127   \else
9128     \ifx\SK@ref\@empty
9129     \else
9130       \def\HyRef@ShowKeysRef{%
9131         \SK@\SK@@ref
9132       }%
9133     \fi
9134   \fi
9135 }
9136 \@ifpackageloaded{showkeys}{%
9137   \HyRef@ShowKeysInit
9138 }{%
9139   \Hy@AtBeginDocument{%
9140     \@ifpackageloaded{showkeys}{%
9141       \HyRef@ShowKeysInit
9142     }{}%
9143   }%
9144 }
```

Defaults for the names that `\autoref` uses.

```
9145 \providecommand*\AMSautorefname{\equationautorefname}
9146 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9147 \providecommand*\Itemautorefname{\itemautorefname}
9148 \providecommand*\itemautorefname{item}
9149 \providecommand*\equationautorefname{Equation}
9150 \providecommand*\footnoteautorefname{footnote}
9151 \providecommand*\itemautorefname{item}
9152 \providecommand*\figureautorefname{Figure}
9153 \providecommand*\tableautorefname{Table}
9154 \providecommand*\partautorefname{Part}
9155 \providecommand*\appendixautorefname{Appendix}
9156 \providecommand*\chapterautorefname{chapter}
9157 \providecommand*\sectionautorefname{section}
9158 \providecommand*\subsectionautorefname{subsection}
9159 \providecommand*\subsubsectionautorefname{subsubsection}
9160 \providecommand*\paragraphautorefname{paragraph}
9161 \providecommand*\subparagraphautorefname{subparagraph}
9162 \providecommand*\FancyVerbLineautorefname{line}
9163 \providecommand*\theoremautorefname{Theorem}
9164 \providecommand*\pageautorefname{page}
9165 \</package>
```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```
9166 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9167 \begingroup\expandafter\expandafter\expandafter\endgroup
9168 \expandafter\ifx\curname pdf@escapestring\endcurname\relax
9169 \begingroup
9170 \catcode`\|=0 %
9171 \@makeother\| %
9172 |@firstofone{|endgroup
9173 |def|Hy@pstringdef#1#2{%
9174 |begingroup
9175 |edef~{|string~}%
9176 |xdef|Hy@gtemp{#2}%
9177 |endgroup
9178 |let#1|Hy@gtemp
9179 |@onelevel@sanitize#1%
9180 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9181 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1|@nil}%
9182 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
9183 }%
9184 |def|Hy@ExchangeBackslash#1#2|@nil{%
9185 #1%
9186 |ifx|\#2|\| %
9187 |else
9188 \| %
9189 |ltx@ReturnAfterFi{%
9190 |Hy@ExchangeBackslash#2|@nil
9191 }%
9192 |fi
9193 }%
9194 }%
9195 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9196 #1%
9197 \ifx\#2\| %
9198 \else
9199 \@backslashchar(%
9200 \ltx@ReturnAfterFi{%
9201 \Hy@ExchangeLeftParenthesis#2\@nil
9202 }%
9203 \fi
```

```

9204 }%
9205 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9206   #1%
9207   \ifx\\#2\\%
9208   \else
9209     \@backslashchar)%
9210     \ltx@ReturnAfterFi{%
9211       \Hy@ExchangeRightParenthesis#2\@nil
9212     }%
9213   \fi
9214 }%
9215 \else
9216 \def\Hy@pstringdef#1#2{%
9217   \begingroup
9218     \edef~{\string~}%
9219     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9220   \endgroup
9221   \let#1\Hy@gtemp
9222 }%
9223 \fi
9224 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9225 <*pdfTeX>
9226 \providecommand*{\XR@ext}{pdf}
9227 \Hy@setbreaklinks{true}
9228 \def\HyPat@ObjRef{%
9229   [0-9]*[1-9][0-9]* 0 R%
9230 }

```

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`

```

9231 \let\Hy@pdfminorversion\relax
9232 \begingroup\expandafter\expandafter\expandafter\endgroup
9233 \expandafter\ifx\cscname pdfminorversion\endcsname\relax
9234   \begingroup\expandafter\expandafter\expandafter\endgroup
9235   \expandafter\ifx\cscname pdfoptionpdfminorversion\endcsname\relax
9236   \else
9237     \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9238   \fi
9239 \else
9240   \def\Hy@pdfminorversion{\pdfminorversion}%
9241 \fi

```



```

9242 \@ifundefined{Hy@pdfminorversion}{%
9243   \PackageInfo{hyperref}{%
9244     PDF version is not set, because pdfTeX is too old (<1.10a)%
9245   }%
9246 }{%
9247   \ifHy@ocgcolorlinks
9248     \ifnum\Hy@pdfmajorminor@version<105 %
9249       \kvsetkeys{Hyp}{pdfversion=1.5}%
9250     \fi
9251   \fi
9252   \ifHy@setpdfversion
9253     \ifnum\Hy@pdf@majorminor@version<105 %
9254       \ltx@ifundefined{pdfobjcompresslevel}{%
9255         }{%
9256           \ifHy@verbose
9257             \Hy@InfoNoLine{%
9258               PDF object streams are disabled, because they are%
9259               \MessageBreak
9260               not supported in requested PDF version %
9261               \Hy@pdf@majorversion.\Hy@pdf@minorversion
9262             }%
9263           \fi
9264           \pdfobjcompresslevel=\ltx@zero
9265         }%
9266       \fi
9267       \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
9268     \else
9269       \let\Hy@temp\ltx@empty
9270       \def\Hy@temp@A#1#2{%
9271         \ifnum#1>\ltx@zero
9272           \edef\Hy@temp{%
9273             \Hy@temp
9274             \space\space
9275             \the#1\space #2%
9276           \ifnum#1=\ltx@one\else s\fi
9277           \MessageBreak
9278         }%
9279       \fi
9280     }%
9281     \Hy@temp@A\pdfastobj{PDF object}%
9282     \Hy@temp@A\pdfastxform{form XObject}%
9283     \Hy@temp@A\pdfastximage{image XObject}%
9284     \Hy@temp@A\pdfastannot{annotation}%
9285     \ltx@ifundefined{pdfastlink}{%
9286     }{%
9287       \Hy@temp@A\pdfastlink{link}%
9288     }%
9289     \ifx\Hy@temp\ltx@empty
9290       \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
9291       \Hy@pdfminorversion=\Hy@pdf@minorversion\relax

```

```

9292 \else
9293 \let\Hy@temp@A\ltx@empty
9294 \ifnum\Hy@pdf@majorminor@version=104 %
9295 \IfFileExists{pdf14.sty}{%
9296 \def\Hy@temp@A{%
9297 \MessageBreak
9298 Or \string\RequirePackage{pdf14} can be used%
9299 \MessageBreak
9300 before \string\documentclass\space as shortcut%
9301 }%
9302 }{%}%
9303 \fi
9304 \Hy@WarningNoLine{%
9305 The PDF version number could not be set,\MessageBreak
9306 because some PDF objects are already written:%
9307 \MessageBreak
9308 \Hy@temp
9309 The version should be set as early as possible:%
9310 \MessageBreak
9311 \space\space
9312 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
9313 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
9314 \string\relax
9315 \ifnum\Hy@pdf@majorminor@version<105 %
9316 \ltx@ifundefined{pdfobjcompresslevel}{%
9317 }{%
9318 \MessageBreak
9319 \space\space
9320 \string\pdfobjcompresslevel=0\string\relax
9321 }%
9322 \fi
9323 \Hy@temp@A
9324 }%
9325 \fi
9326 \fi
9327 \PackageInfo{hyperref}{%
9328 \expandafter\string\Hy@pdfmajorversion.%
9329 \expandafter\string\Hy@pdfminorversion
9330 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
9331 }%
9332 \fi
9333 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
9334 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
9335 }
9336 \Hy@DisableOption{pdfversion}%
9337 \ifHy@ocgcolorlinks
9338 \pdf@ifdraftmode{}{%
9339 \immediate\pdfobj{%
9340 <<%

```

```

9341      /Type/OCG%
9342      /Name(View)%
9343      /Usage<<%
9344      /Print<<%
9345          /PrintState/OFF%
9346      >>%
9347      /View<<%
9348          /ViewState/ON%
9349      >>%
9350      >>%
9351      >>%
9352  }%
9353  \edef\OBJ@OCG@view{\the\pdfflastobj\space 0 R}%
9354  \immediate\pdfobj{%
9355      <<%
9356          /Type/OCG%
9357          /Name(Print)%
9358          /Usage<<%
9359          /Print<<%
9360              /PrintState/ON%
9361          >>%
9362          /View<<%
9363              /ViewState/OFF%
9364          >>%
9365          >>%
9366          >>%
9367      }%
9368      \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
9369      \immediate\pdfobj{%
9370          [%
9371              \OBJ@OCG@view\space\OBJ@OCG@print
9372          ]%
9373      }%
9374      \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
9375      \pdfcatalog{%
9376          /OCProperties<<%
9377              /OCGs \OBJ@OCGs
9378          /D<<%
9379              /OFF[\OBJ@OCG@print]%
9380          /AS[%
9381              <<%
9382                  /Event/View%
9383                  /OCGs \OBJ@OCGs
9384                  /Category[/View]%
9385              >>%
9386              <<%
9387                  /Event/Print%
9388                  /OCGs \OBJ@OCGs
9389                  /Category[/Print]%
9390              >>%

```

```

9391      <<%
9392      /Event/Export%
9393      /OCGs \OBJ@OCGs
9394      /Category[/Print]%
9395      >>%
9396      ]%
9397      >>%
9398      >>%
9399      }%
9400      \begingroup
9401      \edef\x{\endgroup
9402      \pdfpageresources{%
9403      \the\pdfpageresources
9404      /Properties<<%
9405      /OCView \OBJ@OCG@view
9406      /OCPrint \OBJ@OCG@print
9407      >>%
9408      }%
9409      }%
9410      \x
9411      }%
9412      \Hy@AtBeginDocument{%
9413      \def\Hy@colorlink#1{%
9414      \begingroup
9415      \ifHy@ocgcolorlinks
9416      \def\Hy@ocgcolor{#1}%
9417      \setbox0=\hbox\bgroup\color@begingroup
9418      \else
9419      \HyColor@UseColor#1%
9420      \fi
9421      }%
9422      \def\Hy@endcolorlink{%
9423      \ifHy@ocgcolorlinks
9424      \color@endgroup\egroup
9425      \mbox{%
9426      \pdfliteral page{/OC/OCPrint BDC}%
9427      \rlap{\copy0}%
9428      \pdfliteral page{EMC/OC/OCView BDC}%
9429      \begingroup
9430      \expandafter\HyColor@UseColor\Hy@ocgcolor
9431      \box0 %
9432      \endgroup
9433      \pdfliteral page{EMC}%
9434      }%
9435      \fi
9436      \endgroup
9437      }%
9438      }%
9439      \else
9440      \Hy@DisableOption{ocgcolorlinks}%

```

```
9441 \fi
```

First, allow for some changes and additions to pdftex syntax:

```
9442 \def\setpdfinkmargin#1{%
9443   \begingroup
9444     \setlength{\dimen@}{#1}%
9445   \expandafter\endgroup
9446   \expandafter\pdfinkmargin\the\dimen@\relax
9447 }
9448 \ifx\pdfstartlink\@undefined% less than version 14
9449   \let\pdfstartlink\pdfannotlink
9450   \let\pdfinkmargin\@tempdima
9451   \let\pdfxform\pdfform
9452   \let\pdfastxform\pdfastform
9453   \let\pdfrefxform\pdfrefform
9454 \else
9455   \pdfinkmargin1pt %
9456 \fi
```

First set up the default linking

```
9457 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9458 \Hy@WrapperDef\new@pdfink#1{%
9459   \ifhmode
9460     \@savsf\spacefactor
9461   \fi
9462   \Hy@SaveLastskip
9463   \Hy@VerboseAnchor{#1}%
9464   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9465   \Hy@DestName\Hy@pstringDest\@pdfview
9466   \Hy@RestoreLastskip
9467   \ifhmode
9468     \spacefactor\@savsf
9469   \fi
9470 }
9471 \let\pdf@endanchor\@empty
```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```
9472 \def\Hy@DestName#1#2{%
9473   \pdfdest name{#1}#2\relax
9474 }
```

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.

```
9475 \providecommand*\@pdfborder{0 0 1}
9476 \providecommand*\@pdfborderstyle{}
```

```

9477 \def\Hy@undefinedname{UNDEFINED}
9478 \def\find@pdflink#1#2{%
9479   \leavevmode
9480   \protected@edef\Hy@testname{#2}%
9481   \ifx\Hy@testname\@empty
9482     \Hy@Warning{%
9483       Empty destination name,\MessageBreak
9484       using ``\Hy@undefinedname'%
9485     }%
9486     \let\Hy@testname\Hy@undefinedname
9487   \else
9488     \Hy@pstringdef\Hy@testname{%
9489       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9490     }%
9491   \fi
9492   \Hy@StartlinkName{%
9493     \ifHy@pdfa /F 4\fi
9494     \Hy@setpdfborder
9495     \Hy@setpdfhighlight
9496     \ifx\CurrentBorderColor\relax
9497     \else
9498       /C[\CurrentBorderColor]%
9499     \fi
9500   }\Hy@testname
9501   \expandafter\Hy@colorlink\csname @#1color\endcsname
9502 }
9503 \def\Hy@StartlinkName#1#2{%
9504   \pdfstartlink attr{#1}goto name{#2}\relax
9505 }
9506 \def\close@pdflink{%
9507   \Hy@endcolorlink
9508   \Hy@VerboseLinkStop
9509   \pdfendlink
9510 }
9511 \def\hyper@anchor#1{%
9512   \new@pdflink{#1}\anchor@spot\pdf@endanchor
9513 }
9514 \def\hyper@anchorstart#1{%
9515   \new@pdflink{#1}%
9516   \Hy@activeanchortrue
9517 }
9518 \def\hyper@anchorend{%
9519   \pdf@endanchor
9520   \Hy@activeanchorfalse
9521 }
9522 \def\hyper@linkstart#1#2{%
9523   \Hy@VerboseLinkStart{#1}{#2}%
9524   \ltx@ifundefined{@#1bordercolor}{%
9525     \let\CurrentBorderColor\relax
9526   }{%

```

```

9527 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9528 }%
9529 \find@pdfink{#1}{#2}%
9530 }
9531 \def\hyper@linkend{\close@pdfink}
9532 \def\hyper@link#1#2#3{%
9533 \Hy@VerboseLinkStart{#1}{#2}%
9534 \ltx@ifundefined{@#1bordercolor}{%
9535 \let\CurrentBorderColor\relax
9536 }{%
9537 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9538 }%
9539 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9540 \close@pdfink
9541 }
9542 \let\CurrentBorderColor\@linkbordercolor
9543 \def\hyper@linkurl#1#2{%
9544 \begingroup
9545 \Hy@pstringdef\Hy@pstringURI{#2}%
9546 \hyper@chars
9547 \leavevmode
9548 \pdfstartlink
9549 attr{%
9550 \Hy@setpdfborder
9551 \Hy@setpdfhighlight
9552 \ifx\@urlbordercolor\relax
9553 \else
9554 /C[\@urlbordercolor]%
9555 \fi
9556 }%
9557 user{%
9558 /Subtype/Link%
9559 \ifHy@pdfa /F 4\fi
9560 /A<<%
9561 /Type/Action%
9562 /S/URI%
9563 /URI(\Hy@pstringURI)%
9564 \ifHy@href@ismap
9565 /IsMap true%
9566 \fi
9567 \Hy@href@nextactionraw
9568 >>%
9569 }%
9570 \relax
9571 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9572 \close@pdfink
9573 \endgroup
9574 }
9575 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9576 \begingroup

```

```

9577 \def\Hy@pstringF{#2}%
9578 \Hy@CleanupFile\Hy@pstringF
9579 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9580 \Hy@pstringdef\Hy@pstringD{#3}%
9581 \Hy@MakeRemoteAction
9582 \leavevmode
9583 \pdfstartlink
9584 attr{%
9585     \Hy@setpdfborder
9586     \Hy@setpdfhighlight
9587     \ifx\@filebordercolor\relax
9588     \else
9589     /C[\@filebordercolor]%
9590     \fi
9591 }%
9592 user {%
9593     /Subtype/Link%
9594     \ifHy@pdfa /F 4\fi
9595     /A<<%
9596     /F(\Hy@pstringF)%
9597     /S/GoToR%
9598     \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}

```

```

9599     \ifx\#3\%
9600     /D[\Hy@href@page\@pdfremotestartview]%
9601     \else
9602     /D(\Hy@pstringD)%
9603     \fi
9604     \Hy@href@nextactionraw
9605     >>%
9606     }%
9607     \relax
9608     \Hy@colorlink\@filecolor#1\Hy@xspace@end
9609     \close@pdflink
9610     \endgroup
9611 }
9612 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9613     \begingroup

```



```

9614 \Hy@pstringdef\Hy@pstringF{#1}%
9615 \Hy@pstringdef\Hy@pstringP{#3}%
9616 \leavevmode
9617 \pdfstartlink
9618 attr{%
9619   \Hy@setpdfborder
9620   \Hy@setpdfhighlight
9621   \ifx\@runbordercolor\relax
9622   \else
9623     /C[\@runbordercolor]%
9624   \fi
9625 }%
9626 user {%
9627   /Subtype/Link%
9628   \ifHy@pdfa /F 4\fi
9629   /A<<%
9630     /F(\Hy@pstringF)%
9631     /S/Launch%
9632     \Hy@SetNewWindow
9633     \ifx\#3\%
9634     \else
9635       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9636     \fi
9637     \Hy@href@nextactionraw
9638     >>%
9639   }%
9640   \relax
9641   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9642   \close@pdfink
9643 \endgroup
9644 }

```

\PDF@SetupDox

```

9645 \def\PDF@SetupDoc{%
9646   \ifx\@pdfpagescrop\@empty
9647   \else
9648     \edef\process@me{%
9649       \pdfpagesattr={%
9650         /CropBox[\@pdfpagescrop]%
9651         \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9652       \else
9653         ^^Jthe\pdfpagesattr
9654       \fi
9655     }%
9656   }%
9657   \process@me
9658 \fi
9659 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9660 \pdfcatalog{%
9661   /PageMode/\@pdfpagemode

```

```

9662 \ifx\@baseurl\@empty
9663 \else
9664 /URI<</Base(\Hy@pstringB)>>%
9665 \fi
9666 }%
9667 \ifx\@pdfstartpage\@empty
9668 \else
9669 \ifx\@pdfstartview\@empty
9670 \else
9671 openaction goto page\@pdfstartpage{\@pdfstartview}%
9672 \fi
9673 \fi
9674 \edef\Hy@temp{%
9675 \ifHy@pdftoolbar\else /HideToolbar true\fi
9676 \ifHy@pdfmenubar\else /HideMenubar true\fi
9677 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9678 \ifHy@pdfwindow /FitWindow true\fi
9679 \ifHy@pdfcenterwindow /CenterWindow true\fi
9680 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9681 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9682 \Hy@UseNameKey{Direction}\@pdfdirection
9683 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9684 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9685 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9686 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9687 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9688 \Hy@UseNameKey{Duplex}\@pdfduplex
9689 \ifx\@pdfpicktraybypdfsize\@empty
9690 \else
9691 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9692 \fi
9693 \ifx\@pdfprintpagerange\@empty
9694 \else
9695 /PrintPageRange[\@pdfprintpagerange]%
9696 \fi
9697 \ifx\@pdfnumcopies\@empty
9698 \else
9699 /NumCopies \@pdfnumcopies
9700 \fi
9701 }%
9702 \pdfcatalog{%
9703 \ifx\Hy@temp\@empty
9704 \else
9705 /ViewerPreferences<<\Hy@temp>>%
9706 \fi
9707 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9708 \ifx\@pdflang\relax
9709 \else
9710 /Lang(\@pdflang)%
9711 \fi

```

```

9712 }%
9713 }

```

\PDF@FinishDoc

```

9714 \def\PDF@FinishDoc{%
9715   \pdf@ifdraftmode{}{%
9716     \Hy@UseMaketitleInfos
9717     \HyInfo@GenerateAddons
9718     \pdfinfo{%
9719       /Author(\@pdfauthor)%
9720       /Title(\@pdftitle)%
9721       /Subject(\@pdfsubject)%
9722       /Creator(\@pdfcreator)%
9723       \ifx\@pdfcreationdate\@empty
9724       \else
9725         /CreationDate(\@pdfcreationdate)%
9726       \fi
9727       \ifx\@pdfmoddate\@empty
9728       \else
9729         /ModDate(\@pdfmoddate)%
9730       \fi
9731       \ifx\@pdfproducer\relax
9732       \else
9733         /Producer(\@pdfproducer)%
9734       \fi
9735       /Keywords(\@pdfkeywords)%
9736       \ifx\@pdftrapped\@empty
9737       \else
9738         /Trapped/\@pdftrapped
9739       \fi
9740       \HyInfo@Addons
9741     }%
9742   }%
9743   \Hy@DisableOption{pdfauthor}%
9744   \Hy@DisableOption{pdftitle}%
9745   \Hy@DisableOption{pdfsubject}%
9746   \Hy@DisableOption{pdfcreator}%
9747   \Hy@DisableOption{addtopdfcreator}%
9748   \Hy@DisableOption{pdfcreationdate}%
9749   \Hy@DisableOption{pdfmoddate}%
9750   \Hy@DisableOption{pdfproducer}%
9751   \Hy@DisableOption{pdfkeywords}%
9752   \Hy@DisableOption{pdftrapped}%
9753   \Hy@DisableOption{pdfinfo}%
9754 }

```

\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.

```

9755 \def\hyper@pagetransition{%
9756 \ifx\@pdfpagetransition\relax
9757 \else
9758 \expandafter\Hy@RemoveTransPageAttr
9759 \the\pdfpageattr^^J/Trans{}>>\END
9760 \ifx\@pdfpagetransition\@empty
9761 \else
9762 \edef\@processme{%
9763 \global\pdfpageattr{%
9764 \the\pdfpageattr
9765 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9766 }%
9767 }%
9768 \@processme
9769 \fi
9770 \fi
9771 }

```

`\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.

```

9772 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9773 \ifx\\#2\\%
9774 \global\pdfpageattr{#1}%
9775 \else
9776 \Hy@RemoveTransPageAttr#1#4\END
9777 \fi
9778 }

```

`\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`.

```

9779 \def\hyper@pageduration{%
9780 \ifx\@pdfpageduration\relax
9781 \else
9782 \expandafter
9783 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9784 \ifx\@pdfpageduration\@empty
9785 \else
9786 \edef\@processme{%
9787 \global\pdfpageattr{%
9788 \the\pdfpageattr
9789 ^^J/Dur \@pdfpageduration\space
9790 }%
9791 }%
9792 \@processme
9793 \fi

```

```

9794 \fi
9795 }

```

`\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.

```

9796 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9797   \ifx\#2\%
9798     \global\pdfpageattr{#1}%
9799   \else
9800     \Hy@RemoveDurPageAttr#1#4\END
9801   \fi
9802 }

```

```

9803 \pdf@ifdraftmode{}{%
9804   \g@addto@macro\Hy@EveryPageHook{%
9805     \hyper@pagetransition
9806     \hyper@pageduration
9807   }%
9808 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9809 </pdftex>
9810 <*pdftex | xetex>
9811 \Hy@AtBeginDocument{%
9812   \ifHy@setpagesize
9813     \expandafter\@firstofone
9814   \else
9815     \expandafter\@gobble
9816   \fi
9817   {%
9818     \@ifclassloaded{seminar}{%
9819 <*pdftex>
9820   \setlength{\pdfhorigin}{1truein}%
9821   \setlength{\pdfvorigin}{1truein}%
9822 </pdftex>
9823   \ifportrait
9824     \ifdim\paperwidth=\z@
9825   \else
9826     \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9827   \fi
9828   \ifdim\paperheight=\z@
9829   \else
9830     \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9831   \fi
9832   \else
9833     \ifdim\paperheight=\z@
9834   \else

```

```

9835     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9836     \fi
9837     \ifdim\paperwidth=\z@
9838     \else
9839     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9840     \fi
9841     \fi
9842   }{%
9843     \ltx@ifundefined{stockwidth}{%
9844       \ifdim\paperwidth>\z@
9845       \setlength{\pdfpagewidth}{\paperwidth}%
9846       \fi
9847       \ifdim\paperheight>\z@
9848       \setlength{\pdfpageheight}{\paperheight}%
9849       \fi
9850     }{%
9851       \ifdim\stockwidth>\z@
9852       \setlength{\pdfpagewidth}{\stockwidth}%
9853       \fi
9854       \ifdim\stockheight>\z@
9855       \setlength{\pdfpageheight}{\stockheight}%
9856       \fi
9857     }%
9858   }%
9859 }%
9860 \Hy@DisableOption{setpagesize}%
9861 }
9862 </pdfTeX | xetex>
9863 <*pdfTeX>
9864 \def\Acrobatmenu#1#2{%
9865   \Hy@Acrobatmenu{#1}{#2}{%
9866     \leavevmode
9867     \EdefEscapeName\Hy@temp@menu{#1}%
9868     \pdfstartlink
9869     attr{%
9870       \Hy@setpdfborder
9871       \Hy@setpdfhighlight
9872       \ifx\@menubordercolor\relax
9873       \else
9874       /C[\@menubordercolor]%
9875       \fi
9876     }%
9877     user{%
9878       /Subtype/Link%
9879       \ifHy@pdfa /F 4\fi
9880       /A<<%
9881       /S/Named%
9882       /N/\Hy@temp@menu
9883       \Hy@href@nextactionraw
9884     >>%

```

```

9885     }%
9886     \relax
9887     \Hy@colorlink\@menucolor#2%
9888     \close@pdflink
9889 }%
9890 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_{TEX}'s low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdf_{TEX}—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.

```

9891 </pdfTeX>

```

47.3 hypertex

The Hyper_{TEX} specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the _{TEX} file — the _{TEX} commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with

a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that ‘’ characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

9892 <*hypertext>
9893 \providecommand*{\XR@ext}{dvi}
9894 \let\PDF@FinishDoc\ltx@empty
9895 \def\PDF@SetupDoc{%
9896   \ifx\@baseurl\@empty
9897   \else
9898     \special{html:<base href="\@baseurl">}%
9899   \fi
9900 }
9901 \Hy@WrapperDef\hyper@anchor#1{%
9902   \Hy@SaveLastskip
9903   \Hy@VerboseAnchor{#1}%
9904   \begingroup
9905     \let\protect=\string
9906     \hyper@chars
9907     \special{html:<a name=%
9908       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9909   \endgroup
9910   \Hy@activeanchortrue
9911   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9912   \special{html:</a>}%
9913   \Hy@activeanchorfalse
9914   \Hy@RestoreLastskip
9915 }
9916 \Hy@WrapperDef\hyper@anchorstart#1{%
9917   \Hy@SaveLastskip
9918   \Hy@VerboseAnchor{#1}%
9919   \begingroup
9920     \hyper@chars
9921     \special{html:<a name=%
9922       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9923   \endgroup
9924   \Hy@activeanchortrue
9925 }
9926 \def\hyper@anchorend{%
9927   \special{html:</a>}%
9928   \Hy@activeanchorfalse
9929   \Hy@RestoreLastskip
9930 }
9931 \def\@urltype{url}
9932 \def\hyper@linkstart#1#2{%
9933   \Hy@VerboseLinkStart{#1}{#2}%

```



```

9934 \expandafter\Hy@colorlink\csname @#1color\endcsname
9935 \def\Hy@tempa{#1}%
9936 \ifx\Hy@tempa\@urlltype
9937 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9938 \else
9939 \begingroup
9940 \hyper@chars
9941 \special{html:<a href=%
9942 \hyper@quote\#\Hy@HyperDestNameFilter{#2}\hyper@quote>}%
9943 \endgroup
9944 \fi
9945 }
9946 \def\hyper@linkend{%
9947 \special{html:</a>}%
9948 \Hy@endcolorlink
9949 }
9950 \def\hyper@linkfile#1#2#3{%
9951 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9952 }
9953 \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.

```

9954 \leavevmode
9955 \ifHy@raiselinks
9956 \Hy@SaveSpaceFactor
9957 \Hy@SaveSavedSpaceFactor
9958 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9959 \Hy@RestoreSavedSpaceFactor
9960 \@linkdim\dp\@tempboxa
9961 \lower\@linkdim\hbox{%
9962 \hyper@chars
9963 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9964 }%
9965 \Hy@colorlink\@urlcolor
9966 \Hy@RestoreSpaceFactor
9967 #1%
9968 \Hy@SaveSpaceFactor
9969 \@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).

```

9970 \advance\@linkdim by -6.5\p@
9971 \raise\@linkdim\hbox{\special{html:</a>}}%
9972 \Hy@endcolorlink
9973 \Hy@RestoreSpaceFactor
9974 \else
9975 \begingroup

```

```

9976 \hyper@chars
9977 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9978 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9979 \special{html:</a>}%
9980 \Hy@endcolorlink
9981 \endgroup
9982 \fi
9983 }

```

Very poor implementation of `\hyper@link` without considering #1.

```

9984 \def\hyper@link#1#2#3{%
9985 \Hy@VerboseLinkStart{#1}{#2}%
9986 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
9987 }

9988 \def\hyper@image#1#2{%
9989 \begingroup
9990 \hyper@chars
9991 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9992 \endgroup
9993 }
9994 </hypertex>
9995 <*dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` cfg. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

9996 \providecommand*\XR@ext}{dvi}
9997 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9998 \Hy@WrapperDef\hyper@anchor#1{%
9999 \Hy@SaveLastskip
10000 \Hy@VerboseAnchor{#1}%
10001 \begingroup
10002 \let\protect=\string
10003 \special{mark: #1}%
10004 \endgroup
10005 \Hy@activeanchortrue
10006 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10007 \Hy@activeanchorfalse

```

```

10008 \Hy@RestoreLastskip
10009 }
10010 \Hy@WrapperDef\hyper@anchorstart#1{%
10011 \Hy@SaveLastskip
10012 \Hy@VerboseAnchor{#1}%
10013 \special{mark: #1}%
10014 \Hy@activeanchortrue
10015 }
10016 \def\hyper@anchorend{%
10017 \Hy@activeanchorfalse
10018 \Hy@RestoreLastskip
10019 }
10020 \def\hyper@linkstart#1#2{%
10021 \Hy@VerboseLinkStart{#1}{#2}%
10022 \expandafter\Hy@colorlink\csname @#1color\endcsname
10023 \special{button: %
10024 10000000 %
10025 \number\baselineskip\space
10026 #2%
10027 }%
10028 }
10029 \def\hyper@linkend{%
10030 \Hy@endcolorlink
10031 }
10032 \def\hyper@link#1#2#3{%
10033 \Hy@VerboseLinkStart{#1}{#2}%
10034 \leavevmode
10035 \ifHy@raiselinks
10036 \Hy@SaveSpaceFactor
10037 \Hy@SaveSavedSpaceFactor
10038 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10039 \Hy@RestoreSavedSpaceFactor
10040 \@linkdim\dp\@tempboxa
10041 \lower\@linkdim\hbox{%
10042 \special{button: %
10043 \number\wd\@tempboxa\space
10044 \number\ht\@tempboxa\space
10045 #2%
10046 }%
10047 \expandafter\Hy@colorlink\csname @#1color\endcsname
10048 \Hy@RestoreSpaceFactor
10049 #3\Hy@xspace@end
10050 \Hy@SaveSpaceFactor
10051 \Hy@endcolorlink
10052 }%
10053 \@linkdim\ht\@tempboxa
10054 \advance\@linkdim by -6.5\p@
10055 \raise\@linkdim\hbox{}}%
10056 \Hy@RestoreSpaceFactor
10057 \else

```

```

10058 \special{button: %
10059 \number\wd\@tempboxa\space
10060 \number\ht\@tempboxa\space
10061 #2%
10062 }%
10063 \expandafter\Hy@colorlink\csname @#1color\endcsname
10064 #3\Hy@xspace@end
10065 \Hy@endcolorlink
10066 \fi
10067 }
10068 \def\hyper@linkurl#1#2{%
10069 \begingroup
10070 \hyper@chars
10071 \leavevmode
10072 \ifHy@raiselinks
10073 \Hy@SaveSpaceFactor
10074 \Hy@SaveSavedSpaceFactor
10075 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10076 \Hy@RestoreSavedSpaceFactor
10077 \@linkdim\dp\@tempboxa
10078 \lower\@linkdim\hbox{%
10079 \special{button: %
10080 \number\wd\@tempboxa\space
10081 \number\ht\@tempboxa\space
10082 launch: \wwwbrowser\space
10083 #2%
10084 }%
10085 \Hy@colorlink\@urlcolor
10086 \Hy@RestoreSpaceFactor
10087 #1\Hy@xspace@end
10088 \Hy@SaveSpaceFactor
10089 \Hy@endcolorlink
10090 }%
10091 \@linkdim\ht\@tempboxa
10092 \advance\@linkdim by -6.5\p@
10093 \raise\@linkdim\hbox{}%
10094 \Hy@RestoreSpaceFactor
10095 \else
10096 \special{button: %
10097 \number\wd\@tempboxa\space
10098 \number\ht\@tempboxa\space
10099 launch: \wwwbrowser\space
10100 #2%
10101 }%
10102 \Hy@colorlink\@urlcolor
10103 #1\Hy@xspace@end
10104 \Hy@endcolorlink
10105 \fi
10106 \endgroup
10107 }

```

```

10108 \def\hyper@linkfile#1#2#3{%
10109   \begingroup
10110     \hyper@chars
10111     \leavevmode
10112     \ifHy@raiselinks
10113       \Hy@SaveSpaceFactor
10114       \Hy@SaveSavedSpaceFactor
10115       \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10116       \Hy@RestoreSavedSpaceFactor
10117       \@linkdim\dp\@tempboxa
10118       \lower\@linkdim\hbox{%
10119         \special{button: %
10120           \number\wd\@tempboxa\space
10121           \number\ht\@tempboxa\space
10122           #3,%
10123           file: #2%
10124         }%
10125         \Hy@colorlink\@filecolor
10126         \Hy@RestoreSpaceFactor
10127         #1\Hy@xspace@end
10128         \Hy@SaveSpaceFactor
10129         \Hy@endcolorlink
10130       }%
10131       \@linkdim\ht\@tempboxa
10132       \advance\@linkdim by -6.5\p@
10133       \raise\@linkdim\hbox{%}%
10134       \Hy@RestoreSpaceFactor
10135     \else
10136       \special{button: %
10137         \number\wd\@tempboxa\space
10138         \number\ht\@tempboxa\space
10139         #3,%
10140         file: #2%
10141       }%
10142       \Hy@colorlink\@filecolor
10143       #1\Hy@xspace@end
10144       \Hy@endcolorlink
10145     \fi
10146   \endgroup
10147 }
10148 \HyInfo@AddonUnsupportedtrue
10149 \def\PDF@FinishDoc{%
10150   \Hy@UseMaketitleInfos
10151   \HyInfo@TrappedUnsupported
10152   \special{PDF: Keywords \@pdfkeywords}%
10153   \special{PDF: Title \@pdftitle}%
10154   \special{PDF: Creator \@pdfcreator}%
10155   \ifx\@pdfcreationdate\@empty
10156   \else
10157     \special{PDF: CreationDate \@pdfcreationdate}%

```

```

10158 \fi
10159 \ifx\@pdfmoddate\@empty
10160 \else
10161 \special{PDF: ModDate \@pdfmoddate}%
10162 \fi
10163 \special{PDF: Author \@pdfauthor}%
10164 \ifx\@pdfproducer\relax
10165 \else
10166 \special{PDF: Producer \@pdfproducer}%
10167 \fi
10168 \special{PDF: Subject \@pdfsubject}%
10169 \Hy@DisableOption{pdfauthor}%
10170 \Hy@DisableOption{pdftitle}%
10171 \Hy@DisableOption{pdfsubject}%
10172 \Hy@DisableOption{pdfcreator}%
10173 \Hy@DisableOption{addtopdfcreator}%
10174 \Hy@DisableOption{pdfcreationdate}%
10175 \Hy@DisableOption{pdfcreationdate}%
10176 \Hy@DisableOption{pdfmoddate}%
10177 \Hy@DisableOption{pdfproducer}%
10178 \Hy@DisableOption{pdfkeywords}%
10179 \Hy@DisableOption{pdftrapped}%
10180 \Hy@DisableOption{pdfinfo}%
10181 }
10182 \def\PDF@SetupDoc{%
10183 \ifx\@baseurl\@empty
10184 \else
10185 \special{PDF: Base \@baseurl}%
10186 \fi
10187 \ifx\@pdfpagescrop\@empty\else
10188 \special{PDF: BBox \@pdfpagescrop}%
10189 \fi
10190 \def\Hy@temp{%
10191 \ifx\@pdfstartpage\@empty
10192 \else
10193 \ifx\@pdfstartview\@empty
10194 \else
10195 \edef\Hy@temp{%
10196 ,Page=\@pdfstartpage
10197 ,View=\@pdfstartview
10198 }%
10199 \fi
10200 \fi
10201 \edef\Hy@temp{%
10202 \noexpand\pdfmark{%
10203 pdfmark=/DOCVIEW,%
10204 PageMode=/\@pdfpagemode
10205 \Hy@temp
10206 }%
10207 }%

```

```

10208 \Hy@temp
10209 \ifx\@pdfpagescrop\@empty
10210 \else
10211 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10212 \fi
10213 \edef\Hy@temp{%
10214 \ifHy@pdftoolbar\else /HideToolbar true\fi
10215 \ifHy@pdfmenubar\else /HideMenubar true\fi
10216 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10217 \ifHy@pdffitwindow /FitWindow true\fi
10218 \ifHy@pdfcenterwindow /CenterWindow true\fi
10219 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10220 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10221 \Hy@UseNameKey{Direction}\@pdfdirection
10222 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10223 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10224 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10225 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10226 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10227 \Hy@UseNameKey{Duplex}\@pdfduplex
10228 \ifx\@pdfpicktraybypdfsize\@empty
10229 \else
10230 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10231 \fi
10232 \ifx\@pdfprintpagerange\@empty
10233 \else
10234 /PrintPageRange[\@pdfprintpagerange]%
10235 \fi
10236 \ifx\@pdfnumcopies\@empty
10237 \else
10238 /NumCopies \@pdfnumcopies
10239 \fi
10240 }%
10241 \pdfmark{pdfmark=/PUT,%
10242 Raw={%
10243 \string{Catalog}\string}<<%
10244 \ifx\Hy@temp\@empty
10245 \else
10246 /ViewerPreferences<<\Hy@temp>>%
10247 \fi
10248 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10249 \ifx\@pdflang\relax
10250 \else
10251 /Lang(\@pdflang)%
10252 \fi
10253 >>%
10254 }%
10255 }%
10256 }
10257 </diviwindo>

```

10258 \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.

```
10259 \special{dvipdfmx:config C 0x0010}
10260 \providecommand*{\XR@ext}{pdf}
10261 \Hy@setbreaklinks{true}
10262 \def\HyPat@ObjRef{%
10263   @[\^ ]+}%
10264 }
10265 \newsavebox{\pdfm@box}
10266 \def\@pdfm@mark#1{\special{pdf:#1}}
10267 \Hy@WrapperDef\@pdfm@dest#1{%
10268   \Hy@SaveLastskip
10269   \Hy@VerboseAnchor{#1}%
10270   \begingroup
10271     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10272     \def\x{XYZ}%
10273     \ifx\x\@pdfview
10274       \def\x{XYZ @xpos @ypos null}%
10275     \else
10276       \def\x{FitH}%
10277       \ifx\x\@pdfview
10278         \def\x{FitH @ypos}%
10279       \else
10280         \def\x{FitBH}%
10281         \ifx\x\@pdfview
10282           \def\x{FitBH @ypos}%
10283         \else
10284           \def\x{FitV}%
10285           \ifx\x\@pdfview
10286             \def\x{FitV @xpos}%
10287           \else
10288             \def\x{FitBV}%
10289             \ifx\x\@pdfview
10290               \def\x{FitBV @xpos}%
10291             \else
10292               \def\x{Fit}%
10293               \ifx\x\@pdfview
10294                 \let\x\@pdfview
10295               \else
10296                 \def\x{FitB}%
10297                 \ifx\x\@pdfview
10298                   \let\x\@pdfview
10299                 \else
```



```

10300         \def\x{FitR}%
10301         \ifx\x\@pdfview
10302             \Hy@Warning{\`pdfview=FitR' is not supported}%
10303             \def\x{XYZ @xpos @ypos null}%
10304         \else
10305             \@onelevel@sanitize\@pdfview
10306             \Hy@Warning{%
10307                 Unknown value ``\@pdfview' for pdfview%
10308             }%
10309             \def\x{XYZ @xpos @ypos null}%
10310         \fi
10311     \fi
10312 \fi
10313 \fi
10314 \fi
10315 \fi
10316 \fi
10317 \fi
10318 \@pdfm@mark{dest (\Hy@pstringDest) [thispage /\x]}%
10319 \endgroup
10320 \Hy@RestoreLastskip
10321 }
10322 \providecommand*\@pdfview{XYZ}
10323 \providecommand*\@pdfborder{0 0 1}
10324 \providecommand*\@pdfborderstyle{}
10325 \def\hyper@anchor#1{%
10326     \@pdfm@dest{#1}%
10327 }
10328 \def\hyper@anchorstart#1{%
10329     \Hy@activeanchortrue
10330     \@pdfm@dest{#1}%
10331 }
10332 \def\hyper@anchorend{%
10333     \Hy@activeanchorfalse
10334 }
10335 \newcounter{Hy@AnnotLevel}
10336 \ifHy@ocgcolorlinks
10337     \def\OBJ@OCG@view{@OCG@view}%
10338     \@pdfm@mark{%
10339         obj \OBJ@OCG@view <<%
10340         /Type/OCG%
10341         /Name(View)%
10342         /Usage<<%
10343         /Print<<%
10344         /PrintState/OFF%
10345         >>%
10346         /View<<%
10347         /ViewState/ON%
10348         >>%

```

```

10349     >>%
10350     >>%
10351 }%
10352 \@pdfm@mark{close \OBJ@OCG@view}%
10353 \def\OBJ@OCG@print{@OCG@print}%
10354 \@pdfm@mark{%
10355   obj \OBJ@OCG@print <<%
10356     /Type/OCG%
10357     /Name(Print)%
10358     /Usage<<%
10359     /Print<<%
10360     /PrintState/ON%
10361     >>%
10362     /View<<%
10363     /ViewState/OFF%
10364     >>%
10365     >>%
10366     >>%
10367 }%
10368 \@pdfm@mark{close \OBJ@OCG@print}%
10369 \def\OBJ@OCGs{@OCGs}%
10370 \@pdfm@mark{%
10371   obj \OBJ@OCGs [%
10372     \OBJ@OCG@view\space\OBJ@OCG@print
10373   ]%
10374 }%
10375 \@pdfm@mark{close \OBJ@OCGs}%
10376 \@pdfm@mark{%
10377   put @catalog <<%
10378     /OCProperties<<%
10379     /OCGs \OBJ@OCGs
10380     /D<<%
10381     /OFF[\OBJ@OCG@print]%
10382     /AS[%
10383       <<%
10384         /Event/View%
10385         /OCGs \OBJ@OCGs
10386         /Category[/View]%
10387       >>%
10388       <<%
10389         /Event/Print%
10390         /OCGs \OBJ@OCGs
10391         /Category[/Print]%
10392       >>%
10393       <<%
10394         /Event/Export%
10395         /OCGs \OBJ@OCGs
10396         /Category[/Print]%
10397       >>%
10398     ]%

```

```

10399     >>%
10400     >>%
10401     >>%
10402 }%
10403 \AtBeginShipout{%
10404   \setbox\AtBeginShipoutBox=\hbox{%
10405     \copy\AtBeginShipoutBox
10406     \@pdfm@mark{%
10407       put @resources <<%
10408         /Properties<<%
10409         /OCView \OBJ@OCG@view
10410         /OCPrint \OBJ@OCG@print
10411       >>%
10412     >>%
10413   }%
10414 }%
10415 }%
10416 \Hy@AtBeginDocument{%
10417   \def\Hy@colorlink#1{%
10418     \begingroup
10419     \ifHy@ocgcolorlinks
10420       \def\Hy@ocgcolor{#1}%
10421       \setbox0=\hbox\bgroup\color@begingroup
10422     \else
10423       \HyColor@UseColor#1%
10424     \fi
10425   }%
10426   \def\Hy@endcolorlink{%
10427     \ifHy@ocgcolorlinks
10428       \color@endgroup\egroup
10429       \mbox{%
10430         \@pdfm@mark{content /OC/OCPrint BDC}%
10431         \rlap{\copy0}%
10432         \@pdfm@mark{content EMC/OC/OCView BDC}%
10433       \begingroup
10434         \expandafter\HyColor@UseColor\Hy@ocgcolor
10435         \box0 %
10436       \endgroup
10437       \@pdfm@mark{content EMC}%
10438     }%
10439   \fi
10440   \endgroup
10441 }%
10442 }%
10443 \else
10444   \Hy@DisableOption{ocgcolorlinks}%
10445 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter`
(github issue/13)

```

10446 \def\Hy@BeginAnnot#1{%
10447   \global\advance\c@Hy@AnnotLevel\@ne
10448   \ifnum\c@Hy@AnnotLevel=\@ne
10449     #1%
10450   \fi
10451 }
10452 \def\Hy@endAnnot{%
10453   \ifnum\value{Hy@AnnotLevel}=\@ne
10454     \Hy@endcolorlink
10455     \@pdfm@mark{eann}%
10456   \fi
10457   \global\advance\c@Hy@AnnotLevel\m@ne
10458 }

10459 \def\Hy@undefinedname{UNDEFINED}
10460 \def\hyper@linkstart#1#2{%
10461   \Hy@VerboseLinkStart{#1}{#2}%
10462   \leavevmode
10463   \Hy@BeginAnnot{%
10464     \protected@edef\Hy@testname{#2}%
10465     \ifx\Hy@testname\@empty
10466       \Hy@Warning{%
10467         Empty destination name,\MessageBreak
10468         using ``\Hy@undefinedname'%
10469       }%
10470       \let\Hy@testname\Hy@undefinedname
10471     \else
10472       \Hy@pstringdef\Hy@testname{%
10473         \expandafter\HyperDestNameFilter\expandafter{%
10474           \Hy@testname
10475         }%
10476       }%
10477     \fi
10478     \@pdfm@mark{%
10479       bann<<%
10480       /Type/Annot%
10481       /Subtype/Link%
10482       \ifHy@pdfa /F 4\fi
10483       \Hy@setpdfborder
10484       \Hy@setpdfhighlight
10485       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10486       \else
10487         /C[\csname @#1bordercolor\endcsname]%
10488       \fi
10489       /A<<%
10490       /S/GoTo%
10491       /D(\Hy@testname)%
10492       \Hy@href@nextactionraw
10493       >>%
10494       >>%

```

```

10495 }%
10496 \expandafter\Hy@colorlink\csname @#1color\endcsname
10497 }%
10498 }
10499 \def\hyper@linkend{\Hy@EndAnnot}%
10500 \def\hyper@link#1#2#3{%
10501 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10502 }
10503 \def\hyper@linkfile#1#2#3{%
10504 \leavevmode
10505 \Hy@BeginAnnot{%
10506 \def\Hy@pstringF{#2}%
10507 \Hy@CleanupFile\Hy@pstringF
10508 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10509 \Hy@pstringdef\Hy@pstringD{#3}%
10510 \Hy@MakeRemoteAction
10511 \@pdfm@mark{%
10512 bann<<%
10513 /Type/Annot%
10514 /Subtype/Link%
10515 \ifHy@pdfa /F 4\fi
10516 \Hy@setpdfborder
10517 \Hy@setpdfhighlight
10518 \ifx\@filebordercolor\relax
10519 \else
10520 /C[\@filebordercolor]%
10521 \fi
10522 /A<<%
10523 /S/GoToR%
10524 /F(\Hy@pstringF)%
10525 /D%
10526 \ifx\@#3\%
10527 [\Hy@href@page\@pdfremotestartview]%
10528 \else
10529 (\Hy@pstringD)%
10530 \fi
10531 \Hy@SetNewWindow
10532 \Hy@href@nextactionraw
10533 >>%
10534 >>%
10535 }%
10536 \Hy@colorlink\@filecolor
10537 }%
10538 #1\Hy@xspace@end
10539 \Hy@EndAnnot
10540 }
10541 \def\@hyper@launch run:#1\@#2#3{% filename, anchor text linkname
10542 \leavevmode
10543 \Hy@BeginAnnot{%
10544 \Hy@pstringdef\Hy@pstringF{#1}%

```

```

10545 \Hy@pstringdef\Hy@pstringP{#3}%
10546 \@pdfm@mark{%
10547   bann<<%
10548     /Type/Annot%
10549     /Subtype/Link%
10550     \ifHy@pdfa /F 4\fi
10551     \Hy@setpdfborder
10552     \Hy@setpdfhighlight
10553     \ifx\@runbordercolor\relax
10554     \else
10555       /C[\@runbordercolor]%
10556     \fi
10557     /A<<%
10558     /F(\Hy@pstringF)%
10559     /S/Launch%
10560     \Hy@SetNewWindow
10561     \ifx\#3\%
10562     \else
10563       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10564     \fi
10565     \Hy@href@nextactionraw
10566     >>%
10567   >>%
10568 }%
10569 \Hy@colorlink\@runcolor
10570 }%
10571 #2\Hy@xspace@end
10572 \Hy@EndAnnot
10573 }
10574 \def\hyper@linkurl#1#2{%
10575   \leavevmode
10576   \Hy@BeginAnnot{%
10577     \Hy@pstringdef\Hy@pstringURI{#2}%
10578     \@pdfm@mark{%
10579       bann<<%
10580         /Type/Annot%
10581         /Subtype/Link%
10582         \ifHy@pdfa /F 4\fi
10583         \Hy@setpdfborder
10584         \Hy@setpdfhighlight
10585         \ifx\@urlbordercolor\relax
10586         \else
10587           /C[\@urlbordercolor]%
10588         \fi
10589         /A<<%
10590         /S/URI%
10591         /URI(\Hy@pstringURI)%
10592         \ifHy@href@ismap
10593           /IsMap true%
10594         \fi

```

```

10595     \Hy@href@nextactionraw
10596     >>%
10597     >>%
10598     }%
10599     \Hy@colorlink\@urlcolor
10600     }%
10601     #1\Hy@xspace@end
10602     \Hy@EndAnnot
10603 }
10604 \def\Acrobatmenu#1#2{%
10605     \Hy@Acrobatmenu{#1}{#2}{%
10606         \Hy@BeginAnnot{%
10607             \EdefEscapeName\Hy@temp@menu{#1}%
10608             \@pdfm@mark{%
10609                 bann<<%
10610                 /Type/Annot%
10611                 /Subtype/Link%
10612                 \ifHy@pdfa /F 4\fi
10613                 \Hy@setpdfborder
10614                 \Hy@setpdfhighlight
10615                 \ifx\@menubordercolor\relax
10616                     \else
10617                     /C[\@menubordercolor]%
10618                     \fi
10619                 /A<<%
10620                 /S/Named%
10621                 /N/\Hy@temp@menu
10622                 \Hy@href@nextactionraw
10623                 >>%
10624                 >>%
10625                 }%
10626                 \Hy@colorlink\@menucolor
10627             }%
10628             #2\Hy@xspace@end
10629             \Hy@EndAnnot
10630         }%
10631     }
10632
10633 \def\PDF@FinishDoc{%
10634     \Hy@UseMaketitleInfos
10635     \Hy@Info@GenerateAddons
10636     \@pdfm@mark{%
10637         docinfo<<%
10638         /Title(\@pdftitle)%
10639         /Subject(\@pdfsubject)%
10640         /Creator(\@pdfcreator)%
10641         \ifx\@pdfcreationdate\@empty
10642             \else
10643             /CreationDate(\@pdfcreationdate)%
10644         \fi

```

```

10645 \ifx\@pdfmoddate\@empty
10646 \else
10647 /ModDate(\@pdfmoddate)%
10648 \fi
10649 /Author(\@pdfauthor)%
10650 \ifx\@pdfproducer\relax
10651 \else
10652 /Producer(\@pdfproducer)%
10653 \fi
10654 /Keywords(\@pdfkeywords)%
10655 \ifx\@pdftrapped\@empty
10656 \else
10657 /Trapped/\@pdftrapped
10658 \fi
10659 \HyInfo@Addons
10660 >>%
10661 }%
10662 \Hy@DisableOption{pdfauthor}%
10663 \Hy@DisableOption{pdftitle}%
10664 \Hy@DisableOption{pdfsubject}%
10665 \Hy@DisableOption{pdfcreator}%
10666 \Hy@DisableOption{addtopdfcreator}%
10667 \Hy@DisableOption{pdfcreationdate}%
10668 \Hy@DisableOption{pdfcreationdate}%
10669 \Hy@DisableOption{pdfmoddate}%
10670 \Hy@DisableOption{pdfproducer}%
10671 \Hy@DisableOption{pdfkeywords}%
10672 \Hy@DisableOption{pdftrapped}%
10673 \Hy@DisableOption{pdfinfo}%
10674 }

10675 \def\PDF@SetupDoc{%
10676 \edef\Hy@temp{%
10677 \ifHy@pdftoolbar\else /HideToolbar true\fi
10678 \ifHy@pdfmenubar\else /HideMenubar true\fi
10679 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10680 \ifHy@pdfwindow /FitWindow true\fi
10681 \ifHy@pdfcenterwindow /CenterWindow true\fi
10682 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10683 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10684 \Hy@UseNameKey{Direction}\@pdfdirection
10685 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10686 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10687 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10688 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10689 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10690 \Hy@UseNameKey{Duplex}\@pdfduplex
10691 \ifx\@pdfpicktraybypdfsize\@empty
10692 \else
10693 /PickTrayByPDFSize \@pdfpicktraybypdfsize

```



```

10694 \fi
10695 \ifx\@pdfprintpagerange\@empty
10696 \else
10697   /PrintPageRange[\@pdfprintpagerange]%
10698 \fi
10699 \ifx\@pdfnumcopies\@empty
10700 \else
10701   /NumCopies \@pdfnumcopies
10702 \fi
10703 }%
10704 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10705 \@pdfm@mark{%
10706 docview<<%
10707   \ifx\@pdfstartpage\@empty
10708   \else
10709     \ifx\@pdfstartview\@empty
10710     \else
10711       /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10712     \fi
10713   \fi
10714   \ifx\@baseurl\@empty
10715   \else
10716     /URI<</Base(\Hy@pstringB)>>%
10717   \fi
10718   /PageMode/\@pdfpagemode
10719   \ifx\Hy@temp\@empty
10720   \else
10721     /ViewerPreferences<<\Hy@temp>>%
10722   \fi
10723   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10724   \ifx\@pdflang\relax
10725   \else
10726     /Lang(\@pdflang)%
10727   \fi
10728   >>%
10729 }%
10730 \ifx\@pdfpagescrop\@empty
10731 \else
10732   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10733 \fi
10734 }
10735 </dvi pdfm | xetex>
10736 <*dvi pdfm | xetex>

```

\hyper@pagetransition

```

10737 \def\hyper@pagetransition{%
10738 \ifx\@pdfpagetransition\relax
10739 \else
10740 \ifx\@pdfpagetransition\@empty

```

```

10741 \else
10742 \special{pdf:put @thispage %
10743 <</Trans<</S/\@pdfpagetransition>>>>%
10744 }%
10745 \fi
10746 \fi
10747 }

```

\hyper@pageduration

```

10748 \def\hyper@pageduration{%
10749 \ifx\@pdfpageduration\relax
10750 \else
10751 \ifx\@pdfpageduration\@empty
10752 \else
10753 \special{pdf:put @thispage %
10754 <</Dur \@pdfpageduration>>>>%
10755 }%
10756 \fi
10757 \fi
10758 }

10759 \g@addto@macro\Hy@EveryPageBoxHook{%
10760 \hyper@pagetransition
10761 \hyper@pageduration
10762 }

10763 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10764 <*dvipdfm>
10765 \AtBeginShipoutFirst{%
10766 \ifHy@setpagesize
10767 \begingroup
10768 \@ifundefined{stockwidth}{%
10769 \ifdim\paperwidth>\z@
10770 \ifdim\paperheight>\z@
10771 \special{papersize=\the\paperwidth,\the\paperheight}%
10772 \fi
10773 \fi
10774 }{%
10775 \ifdim\stockwidth>\z@
10776 \ifdim\stockheight>\z@
10777 \special{papersize=\the\stockwidth,\the\stockheight}%
10778 \fi
10779 \fi
10780 }%
10781 \endgroup
10782 \fi
10783 \Hy@DisableOption{setpagesize}%
10784 }

```

10785 \langle /dvipdfm \rangle

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.

```
10786  $\langle$ *vtexhtml $\rangle$ 
10787 \providecommand*{\XR@ext}{.htm}
10788 \RequirePackage{vtexhtml}
10789 \newif\if@Localurl
10790 \let\PDF@FinishDoc\ltx@empty
10791 \def\PDF@SetupDoc{%
10792   \ifx\@baseurl\@empty
10793   \else
10794     \special{!direct <base href="\@baseurl">}%
10795   \fi
10796 }
10797 \def\@urltype{url}
10798 \def\hyper@link#1#2#3{%
10799   \Hy@VerboseLinkStart{#1}{#2}%
10800   \leavevmode
10801   \special{!direct <a href=%
10802     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10803   #3\Hy@xspace@end
10804   \special{!direct </a>}%
10805 }
10806 \def\hyper@linkurl#1#2{%
10807   \begingroup
10808     \hyper@chars
10809     \leavevmode
10810     \MathBSuppress=1\relax
10811     \special{!direct <a href=%
10812       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10813     #1\Hy@xspace@end
10814     \MathBSuppress=0\relax
10815     \special{!direct </a>}%
10816   \endgroup
10817 }
10818 \def\hyper@linkfile#1#2#3{%
10819   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10820 }
10821 \def\hyper@linkstart#1#2{%
10822   \Hy@VerboseLinkStart{#1}{#2}%
10823   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10824     \@Localurltrue
10825     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10826   \else
10827     \@Localurlfalse
10828   \begingroup
```

```

10829 \hyper@chars
10830 \special{!aref \HyperDestNameFilter{#2}}%
10831 \endgroup
10832 \fi
10833 }
10834 \def\hyper@linkend{%
10835 \if@Localurl
10836 \special{!endaref}%
10837 \else
10838 \special{!direct </a>}%
10839 \fi
10840 }
10841 \Hy@WrapperDef\hyper@anchorstart#1{%
10842 \Hy@SaveLastskip
10843 \Hy@VerboseAnchor{#1}%
10844 \begingroup
10845 \hyper@chars
10846 \special{!aname #1}%
10847 \special{!direct <a name=%
10848 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10849 \endgroup
10850 \Hy@activeanchortrue
10851 }
10852 \def\hyper@anchorend{%
10853 \special{!direct </a>}%
10854 \Hy@activeanchorfalse
10855 \Hy@RestoreLastskip
10856 }
10857 \Hy@WrapperDef\hyper@anchor#1{%
10858 \Hy@SaveLastskip
10859 \Hy@VerboseAnchor{#1}%
10860 \begingroup
10861 \let\protect=\string
10862 \hyper@chars
10863 \leavevmode
10864 \special{!aname #1}%
10865 \special{!direct <a name=%
10866 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10867 \endgroup
10868 \Hy@activeanchortrue
10869 \bgroup\anchor@spot\egroup
10870 \special{!direct </a>}%
10871 \Hy@activeanchorfalse
10872 \Hy@RestoreLastskip
10873 }
10874 \def\@Form[#1]{%
10875 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10876 }
10877 \let\@EndForm\ltx@empty
10878 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum

```

```

10879 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10880 }
10881 \def\@TextField[#1]#2{% parameters, label
10882 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10883 }
10884 \def\@CheckBox[#1]#2{% parameters, label
10885 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10886 }
10887 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10888 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10889 }
10890 \def\@PushButton[#1]#2{% parameters, label
10891 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10892 }
10893 \def\@Reset[#1]#2{%
10894 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10895 }
10896 \def\@Submit[#1]#2{%
10897 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10898 }
10899 </vtexhtml>
10900 <*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.

```

10901 \ifx\mediaheight\@undefined
10902 \else
10903 \ifx\mediaheight\relax
10904 \else
10905 \ifHy@setpagesize
10906 \providecommand*\VTeXInitMediaSize{%
10907 \ltx@IfUndefined{stockwidth}{%
10908 \ifdim\paperheight>0pt %
10909 \setlength\mediaheight\paperheight
10910 \fi
10911 \ifdim\paperheight>0pt %
10912 \setlength\mediawidth\paperwidth
10913 \fi
10914 }{%
10915 \ifdim\stockheight>0pt %
10916 \setlength\mediaheight\stockheight
10917 \fi
10918 \ifdim\stockwidth>0pt %
10919 \setlength\mediawidth\stockwidth
10920 \fi
10921 }%
10922 }%
10923 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10924 \fi

```

```

10925 \Hy@DisableOption{setpagesize}%
10926 \fi
10927 \fi

Older versions of VTeX require xyz in lower case.

10928 \providecommand*\@pdfview{xyz}
10929 \providecommand*\@pdfborder{0 0 1}
10930 \providecommand*\@pdfborderstyle{}
10931 \let\CurrentBorderColor\@linkbordercolor
10932 \Hy@WrapperDef\hyper@anchor#1{%
10933   \Hy@SaveLastskip
10934   \Hy@VerboseAnchor{#1}%
10935   \begingroup
10936     \let\protect=\string
10937     \hyper@chars
10938     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10939   \endgroup
10940   \Hy@activeanchortrue
10941   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10942   \Hy@activeanchorfalse
10943   \Hy@RestoreLastskip
10944 }
10945 \Hy@WrapperDef\hyper@anchorstart#1{%
10946   \Hy@SaveLastskip
10947   \Hy@VerboseAnchor{#1}%
10948   \begingroup
10949     \hyper@chars
10950     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10951   \endgroup
10952   \Hy@activeanchortrue
10953 }
10954 \def\hyper@anchorend{%
10955   \Hy@activeanchorfalse
10956   \Hy@RestoreLastskip
10957 }
10958 \def\@urltype{url}
10959 \def\Hy@undefinedname{UNDEFINED}
10960 \def\hyper@linkstart#1#2{%
10961   \Hy@VerboseLinkStart{#1}{#2}%
10962   \Hy@pstringdef\Hy@pstringURI{#2}%
10963   \expandafter\Hy@colorlink\csname @#1color\endcsname
10964   \ltx@ifundefined{@#1bordercolor}{%
10965     \let\CurrentBorderColor\relax
10966   }{%
10967     \edef\CurrentBorderColor{%
10968       \csname @#1bordercolor\endcsname
10969     }%
10970   }%
10971   \def\Hy@tempa{#1}%
10972   \ifx\Hy@tempa\@urltype

```

```

10973 \special{!%
10974   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10975     \ifHy@href@ismap
10976       /IsMap true%
10977     \fi
10978     \Hy@href@nextactionraw
10979   >;%
10980   a=<%
10981     \ifHy@pdfa /F 4\fi
10982     \Hy@setpdfborder
10983     \ifx\CurrentBorderColor\relax
10984     \else
10985       /C [\CurrentBorderColor]%
10986     \fi
10987   >%
10988 }%
10989 \else
10990 \protected@edef\Hy@testname{#2}%
10991 \ifx\Hy@testname\@empty
10992   \Hy@Warning{%
10993     Empty destination name,\MessageBreak
10994     using `\'Hy@undefinedname'%
10995   }%
10996   \let\Hy@testname\Hy@undefinedname
10997 \fi
10998 \special{!%
10999   aref \expandafter\HyperDestNameFilter
11000     \expandafter{\Hy@testname};%
11001   a=<%
11002     \ifHy@pdfa /F 4\fi
11003     \Hy@setpdfborder
11004     \ifx\CurrentBorderColor\relax
11005     \else
11006       /C [\CurrentBorderColor]%
11007     \fi
11008   >%
11009 }%
11010 \fi
11011 }
11012 \def\hyper@linkend{%
11013 \special{!endaref}%
11014 \Hy@endcolorlink
11015 }
11016 \def\hyper@linkfile#1#2#3{%
11017 \leavevmode
11018 \def\Hy@pstringF{#2}%
11019 \Hy@CleanupFile\Hy@pstringF
11020 \special{!%
11021   aref <%
11022   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi

```

```

11023 f=\Hy@pstringF>#3;%
11024 a=<%
11025   \ifHy@pdfa /F 4\fi
11026   \Hy@setpdfborder
11027   \ifx\@filebordercolor\relax
11028   \else
11029     /C [\@filebordercolor]%
11030   \fi
11031 >%
11032 }%
11033 \Hy@colorlink\@filecolor
11034 #1\Hy@xspace@end
11035 \Hy@endcolorlink
11036 \special{!endaref}%
11037 }
11038 \def\hyper@linkurl#1#2{%
11039 \begingroup
11040   \Hy@pstringdef\Hy@pstringURI{#2}%
11041   \hyper@chars
11042   \leavevmode
11043   \special{!%
11044     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11045     \ifHy@href@ismap
11046       /IsMap true%
11047     \fi
11048     \Hy@href@nextactionraw
11049   >;%
11050   a=<%
11051     \ifHy@pdfa /F 4\fi
11052     \Hy@setpdfborder
11053     \ifx\@urlbordercolor\relax
11054     \else
11055       /C [\@urlbordercolor]%
11056     \fi
11057   >%
11058   }%
11059   \Hy@colorlink\@urlcolor
11060   #1\Hy@xspace@end
11061   \Hy@endcolorlink
11062   \special{!endaref}%
11063 \endgroup
11064 }
11065 \def\hyper@link#1#2#3{%
11066   \Hy@VerboseLinkStart{#1}{#2}%
11067   \ltx@ifundefined{@#1bordercolor}{%
11068     \let\CurrentBorderColor\relax
11069   }{%
11070     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11071   }%
11072   \leavevmode

```



```

11073 \protected@edef\Hy@testname{#2}%
11074 \ifx\Hy@testname\@empty
11075   \Hy@Warning{%
11076     Empty destination name,\MessageBreak
11077     using ``\Hy@undefinedname'%
11078   }%
11079   \let\Hy@testname\Hy@undefinedname
11080 \fi
11081 \special{!%
11082   aref \expandafter\HyperDestNameFilter
11083     \expandafter{\Hy@testname};%
11084   a=<%
11085     \ifHy@pdfa /F 4\fi
11086     \Hy@setpdfborder
11087     \ifx\CurrentBorderColor\relax
11088       \else
11089         /C [\CurrentBorderColor]%
11090     \fi
11091   >%
11092 }%
11093 \expandafter
11094 \Hy@colorlink\csname @#1color\endcsname
11095   #3\Hy@xspace@end
11096 \Hy@endcolorlink
11097 \special{!endaref}%
11098 }
11099 \def\hyper@image#1#2{%
11100   \hyper@linkurl{#2}{#1}%
11101 }
11102 \def\@hyper@launch run:#1\#2#3{%
11103   \Hy@pstringdef\Hy@pstringF{#1}%
11104   \Hy@pstringdef\Hy@pstringP{#3}%
11105   \leavevmode
11106   \special{!aref %
11107     <u=%
11108       /Type/Action%
11109       /S/Launch%
11110       /F(\Hy@pstringF)%
11111       \Hy@SetNewWindow
11112       \ifx\#3\%
11113         \else
11114           /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11115         \fi
11116       \Hy@href@nextactionraw
11117     >;%
11118     a=<%
11119       \ifHy@pdfa /F 4\fi
11120       \Hy@setpdfborder
11121       \ifx\@runbordercolor\relax
11122         \else

```

```

11123      /C[\@runbordercolor]%
11124      \fi
11125      >%
11126    }%
11127    \Hy@colorlink\@runcolor
11128      #2\Hy@xspace@end
11129    \Hy@endcolorlink
11130    \special{!endaref}%
11131  }
11132  \def\Acrobatmenu#1#2{%
11133    \edef\EscapeName\Hy@temp@menu{#1}%
11134    \Hy@Acrobatmenu{#1}{#2}{%
11135      \special{!%
11136        aref <u=/S /Named /N /\Hy@temp@menu>;%
11137        a=<%
11138          \ifHy@pdfa /F 4\fi
11139          \Hy@setpdfborder
11140          \ifx\@menubordercolor\relax
11141            \else
11142              /C[\@menubordercolor]%
11143            \fi
11144          >%
11145        }%
11146        \Hy@colorlink\@menucolor
11147        #2\Hy@xspace@end
11148        \Hy@endcolorlink
11149        \special{!endaref}%
11150      }%
11151    }

```

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*.

```

11152 \ifnum\Hy@VTeXversion<702 %
11153 \else
11154   \def\hyper@pagetransition{%
11155     \ifx\@pdfpagetransition\relax
11156     \else
11157     \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11158   \else
11159     \hvtex@parse@trans\@pdfpagetransition
11160   \fi
11161 \fi
11162 }%

```

I have to write an “honest” parser to convert raw PDF code into V_TE_X `\special`.
(AVK)

Syntax of `\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:

```

11163 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11164 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11165 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11166 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11167 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11168 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11169 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11170 \def\hvtex@par@dimension{/Dm}%
11171 \def\hvtex@par@direction{/Di}%
11172 \def\hvtex@par@duration{/D}%
11173 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

11174 \def\hvtex@gettoken{%
11175   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11176 }%

```

Notice that tokens in the input buffer must be space delimited.

```

11177 \def\hvtex@gettoken@#1 #2\@nil{%
11178   \edef\hvtex@token{#1}%
11179   \edef\hvtex@buffer{#2}%
11180 }%
11181 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11182 \let\hvtex@trans@code\@empty
11183 \let\hvtex@param@dimension\@empty
11184 \let\hvtex@param@direction\@empty
11185 \let\hvtex@param@duration\@empty
11186 \let\hvtex@param@motion\@empty
11187 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```
11188 \hvtex@gettoken
11189 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11190 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11191 \else
11192 \hvtex@gettoken
11193 \fi
11194 \fi
11195 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11196 \hvtex@trans@params
11197 }%
```

Reentrant macro to parse optional parameters.

```
11198 \def\hvtex@trans@params{%
11199 \ifx\hvtex@buffer\@empty
11200 \else
11201 \hvtex@gettoken
11202 \let\hvtex@trans@par\hvtex@token
11203 \ifx\hvtex@buffer\@empty
11204 \else
11205 \hvtex@gettoken
11206 \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```
11207 \let\hvtex@param@duration\hvtex@token
11208 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11209 \expandafter\edef\expandafter\hvtex@param@motion
11210 \expandafter{\expandafter\@gobble\hvtex@token}%
11211 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11212 \expandafter\edef\expandafter\hvtex@param@dimension
11213 \expandafter{\expandafter\@gobble\hvtex@token}%
11214 \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).

```
11215 \let\hvtex@param@direction\hvtex@token
11216 \fi\fi\fi\fi
11217 \fi
11218 \fi
11219 \ifx\hvtex@buffer\@empty
11220 \let\next\hvtex@produce@trans
11221 \else
11222 \let\next\hvtex@trans@params
```

```

11223 \fi
11224 \next
11225 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11226 \def\hvtex@produce@trans{%
11227 \let\vtex@trans@special\@empty
11228 \if S\hvtex@trans@code
11229 \edef\vtex@trans@special{\hvtex@trans@code
11230 \hvtex@param@dimension\hvtex@param@motion}%
11231 \else\if B\hvtex@trans@code
11232 \edef\vtex@trans@special{%
11233 \hvtex@trans@code\hvtex@param@dimension
11234 }%
11235 \else\if X\hvtex@trans@code
11236 \edef\vtex@trans@special{%
11237 \hvtex@trans@code\hvtex@param@motion
11238 }%
11239 \else\if W\hvtex@trans@code
11240 \edef\vtex@trans@special{%
11241 \hvtex@trans@code\hvtex@param@direction
11242 }%
11243 \else\if D\hvtex@trans@code
11244 \let\vtex@trans@special\hvtex@trans@code
11245 \else\if R\hvtex@trans@code
11246 \let\vtex@trans@special\hvtex@trans@code
11247 \else\if G\hvtex@trans@code
11248 \edef\vtex@trans@special{%
11249 \hvtex@trans@code\hvtex@param@direction
11250 }%
11251 \fi\fi\fi\fi\fi\fi
11252 \ifx\vtex@trans@special\@empty
11253 \else
11254 \ifx\hvtex@param@duration\@empty
11255 \else
11256 \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

11257 \multiply\dimen@\@m
11258 \edef\vtex@trans@special{%
11259 \vtex@trans@special,\strip@pt\dimen@
11260 }%
11261 \fi

```

And all the mess is just for this.

```

11262 \special{!trans \vtex@trans@special}%
11263 \fi
11264 }%
11265 \def\hyper@pageduration{%

```

```

11266 \ifx\@pdfpageduration\relax
11267 \else
11268 \ifx\@pdfpageduration\@empty
11269 \special{!duration-}%
11270 \else
11271 \special{!duration \@pdfpageduration}%
11272 \fi
11273 \fi
11274 }%
11275 \g@addto@macro\Hy@EveryPageBoxHook{%
11276 \hyper@pagetransition
11277 \hyper@pageduration
11278 }%
11279 \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

```

11280 \ifx\@pdfproducer\relax
11281 \def\@pdfproducer{VTeX}%
11282 \ifnum\Hy@VTeXversion>\z@
11283 \count@\VTeXversion
11284 \divide\count@ 100 %
11285 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11286 \multiply\count@ -100 %
11287 \advance\count@\VTeXversion
11288 \edef\@pdfproducer{%
11289 \@pdfproducer
11290 .\ifnum\count@<10 0\fi\the\count@
11291 \ifx\VTeXOS\@undefined\else
11292 \ifnum\VTeXOS>0 %
11293 \ifnum\VTeXOS<6 %
11294 \space(%
11295 \ifcase\VTeXOS
11296 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11297 \fi
11298 )%
11299 \fi
11300 \fi
11301 \fi
11302 ,\space
11303 \ifnum\OpMode=\@ne PDF\else PS\fi

```

```

11304 \space backend%
11305 \ifx\gexmode\@undefined\else
11306 \ifnum\gexmode>z@\space with GeX\fi
11307 \fi
11308 }%
11309 \fi
11310 \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).

```

11311 \def\PDF@SetupDoc{%
11312 \ifx\@pdfpagescrop\@empty
11313 \else
11314 \special{!pdfinfo b=<\@pdfpagescrop>}%
11315 \fi
11316 \ifx\@pdfstartpage\@empty
11317 \else
11318 \ifx\@pdfstartview\@empty
11319 \else
11320 \special{!onopen Page\@pdfstartpage}%
11321 \fi
11322 \fi
11323 \special{!pdfinfo p=</\@pdfpagemode>}%
11324 \ifx\@baseurl\@empty
11325 \else
11326 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11327 \fi
11328 \special{!pdfinfo v=<<<%
11329 \ifHy@pdftoolbar\else /HideToolbar true\fi
11330 \ifHy@pdfmenubar\else /HideMenubar true\fi
11331 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11332 \ifHy@pdffitwindow /FitWindow true\fi
11333 \ifHy@pdfcenterwindow /CenterWindow true\fi
11334 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11335 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11336 \Hy@UseNameKey{Direction}\@pdfdirection
11337 \Hy@UseNameKey{ViewArea}\@pdfviewarea

```

```

11338 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11339 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11340 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11341 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11342 \Hy@UseNameKey{Duplex}\@pdfduplex
11343 \ifx\@pdfpicktraybypdfsize\@empty
11344 \else
11345 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11346 \fi
11347 \ifx\@pdfprintpagerange\@empty
11348 \else
11349 /PrintPageRange[\@pdfprintpagerange]%
11350 \fi
11351 \ifx\@pdfnumcopies\@empty
11352 \else
11353 /NumCopies \@pdfnumcopies
11354 \fi
11355 >>>}%
11356 \ifx\@pdfpagelayout\@empty
11357 \else
11358 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11359 \fi
11360 }%
11361 \HyInfo@AddonUnsupportedtrue
11362 \define@key{Hyp}{pdfcreationdate}{%
11363 \Hy@Warning{%
11364 VTeX does not support pdfcreationdate.\MessageBreak
11365 Therefore its setting is ignored%
11366 }%
11367 }
11368 \define@key{Hyp}{pdfmoddate}{%
11369 \Hy@Warning{%
11370 VTeX does not support pdfmoddate.\MessageBreak
11371 Therefore its setting is ignored%
11372 }%
11373 }
11374 \def\PDF@FinishDoc{%
11375 \Hy@UseMaketitleInfos
11376 \HyInfo@TrappedUnsupported
11377 \special{!pdfinfo a=<\@pdfauthor>}%
11378 \special{!pdfinfo t=<\@pdftitle>}%
11379 \special{!pdfinfo s=<\@pdfsubject>}%
11380 \special{!pdfinfo c=<\@pdfcreator>}%
11381 \ifx\@pdfproducer\relax
11382 \else
11383 \special{!pdfinfo r=<\@pdfproducer>}%
11384 \fi
11385 \special{!pdfinfo k=<\@pdfkeywords>}%
11386 \Hy@DisableOption{pdfauthor}%
11387 \Hy@DisableOption{pdftitle}%

```



```

11388 \Hy@DisableOption{pdfsubject}%
11389 \Hy@DisableOption{pdfcreator}%
11390 \Hy@DisableOption{addtopdfcreator}%
11391 \Hy@DisableOption{pdfcreationdate}%
11392 \Hy@DisableOption{pdfcreationdate}%
11393 \Hy@DisableOption{pdfmoddate}%
11394 \Hy@DisableOption{pdfproducer}%
11395 \Hy@DisableOption{pdfkeywords}%
11396 \Hy@DisableOption{pdftrapped}%
11397 \Hy@DisableOption{pdfinfo}%
11398 }
11399 </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.

```

11400 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11401 <package>\providecommand*{\Hy@DistillerDestFix}{%
11402 <*pdfmark | dviwindo>
11403 \def\Hy@DistillerDestFix{%
11404 \begingroup
11405 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11406 \ifnum \@ifundefined{OpMode}{0}{%
11407 \ifundefined{gexmode}{0}{%
11408 \ifnum\gexmode>0 \OpMode\else 0\fi
11409 }>1 %
11410 \def\x##1{%
11411 \immediate\special{!=##1}%
11412 }%
11413 \fi
11414 \x{%
11415 /product where{%
11416 pop %
11417 product(Distiller)search{%
11418 pop pop pop %
11419 version(.)search{%
11420 exch pop exch pop%
11421 (3011)eq{%

```

```

11422      gsave %
11423      newpath 0 0 moveto closepath clip%
11424      /Courier findfont 10 scalefont setfont %
11425      72 72 moveto(.)show %
11426      grestore%
11427    }if%
11428  }{pop}ifelse%
11429  }{pop}ifelse%
11430    }if%
11431  }%
11432 \endgroup
11433 }
11434 </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

```

```

11435 <*pdfmark>
11436 \Hy@breaklinks@unsupported
11437 \def\HyPat@ObjRef{%
11438   \[~{}]+}%
11439 }
11440 \Hy@WrapperDef\hyper@anchor#1{%
11441   \Hy@SaveLastskip
11442   \Hy@VerboseAnchor{#1}%
11443   \begingroup
11444     \pdfmark[\anchor@spot]{%
11445       pdfmark=/DEST,%
11446       linktype=anchor,%
11447       View=/\@pdfview \@pdfviewparams,%
11448       DestAnchor={#1}%
11449     }%
11450   \endgroup
11451   \Hy@RestoreLastskip
11452 }
11453 \ltx@ifundefined{hyper@anchorstart}{\endinput}{
11454 \Hy@WrapperDef\hyper@anchorstart#1{%

```

```

11455 \Hy@SaveLastskip
11456 \Hy@VerboseAnchor{#1}%
11457 \literalps@out{H.S}%
11458 \Hy@AllowHyphens
11459 \xdef\hyper@currentanchor{#1}%
11460 \Hy@activeanchortrue
11461 }
11462 \def\hyper@anchorend{%
11463 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11464 \pdfmark{%
11465 pdfmark=/DEST,%
11466 linktype=anchor,%
11467 View=/\@pdfview \@pdfviewparams,%
11468 DestAnchor=\hyper@currentanchor,%
11469 }%
11470 \Hy@activeanchorfalse
11471 \Hy@RestoreLastskip
11472 }
11473 \def\hyper@linkstart#1#2{%
11474 \Hy@VerboseLinkStart{#1}{#2}%
11475 \ifHy@breaklinks
11476 \else
11477 \leavevmode
11478 \ifmmode
11479 \def\Hy@LinkMath{$}%
11480 \else
11481 \let\Hy@LinkMath\ltx@empty
11482 \fi
11483 \Hy@SaveSpaceFactor
11484 \hbox\bgroup
11485 \Hy@RestoreSpaceFactor
11486 \Hy@LinkMath
11487 \fi
11488 \expandafter\Hy@colorlink\csname @#1color\endcsname
11489 \literalps@out{H.S}%
11490 \Hy@AllowHyphens
11491 \xdef\hyper@currentanchor{#2}%
11492 \gdef\hyper@currentlinktype{#1}%
11493 }
11494 \def\hyper@linkend{%
11495 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11496 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11497 \let\Hy@tempcolor\relax
11498 }{%
11499 \edef\Hy@tempcolor{%
11500 \csname @\hyper@currentlinktype bordercolor\endcsname
11501 }%
11502 }%
11503 \pdfmark{%
11504 pdfmark=/ANN,%

```

```

11505 linktype=link,%
11506 Subtype=/Link,%
11507 PDFAFlags=4,%
11508 Dest=\hyper@currentanchor,%
11509 AcroHighlight=\@pdfhighlight,%
11510 Border=\@pdfborder,%
11511 BorderStyle=\@pdfborderstyle,%
11512 Color=\Hy@tempcolor,%
11513 Raw=H.B%
11514 }%
11515 \Hy@endcolorlink
11516 \ifHy@breaklinks
11517 \else
11518 \Hy@LinkMath
11519 \Hy@SaveSpaceFactor
11520 \egroup
11521 \Hy@RestoreSpaceFactor
11522 \fi
11523 }

```

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.

```

11524 \begingroup
11525 \catcode`P=12 %
11526 \catcode`T=12 %
11527 \lowercase{\endgroup
11528 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11529 }
11530 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11531 \def\hyper@pagetransition{%
11532 \ifx\@pdfpagetransition\relax
11533 \else
11534 \ifx\@pdfpagetransition\@empty
11535 % 1. Does an old entry have to be deleted?
11536 % 2. If 1=yes, how to delete?
11537 \else
11538 \pdfmark{%
11539 pdfmark=/PUT,%
11540 Raw={%
11541 \string{ThisPage\string}%
11542 <</Trans << /S /\@pdfpagetransition\space >> >>%
11543 }%
11544 }%
11545 \fi
11546 \fi
11547 }

```

\hyper@pageduration

```
11548 \def\hyper@pageduration{%
11549 \ifx\@pdfpageduration\relax
11550 \else
11551 \ifx\@pdfpageduration\@empty
11552 % 1. Does an old entry have to be deleted?
11553 % 2. If 1=yes, how to delete?
11554 \else
11555 \pdfmark{%
11556 pdfmark=/PUT,%
11557 Raw={%
11558 \string{ThisPage\string}%
11559 <</Dur \@pdfpageduration>>%
11560 }%
11561 }%
11562 \fi
11563 \fi
11564 }

11565 \g@addto@macro\Hy@EveryPageBoxHook{%
11566 \hyper@pagetransition
11567 \hyper@pageduration
11568 }

11569 \def\hyper@image#1#2{%
11570 \hyper@linkurl{#2}{#1}%
11571 }
11572 \def\Hy@undefinedname{UNDEFINED}
11573 \def\hyper@link#1#2#3{%
11574 \Hy@VerboseLinkStart{#1}{#2}%
11575 \ltx@ifundefined{@#1bordercolor}{%
11576 \let\Hy@tempcolor\relax
11577 }{%
11578 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11579 }%
11580 \begingroup
11581 \protected@edef\Hy@testname{#2}%
11582 \ifx\Hy@testname\@empty
11583 \Hy@Warning{%
11584 Empty destination name,\MessageBreak
11585 using \Hy@undefinedname'%
11586 }%
11587 \let\Hy@testname\Hy@undefinedname
11588 \fi
11589 \pdfmark[{#3}]{%
11590 Color=\Hy@tempcolor,%
11591 linktype={#1},%
11592 AcroHighlight=\@pdfhighlight,%
11593 Border=\@pdfborder,%
11594 BorderStyle=\@pdfborderstyle,%
```

```

11595     pdfmark=/ANN,%
11596     Subtype=/Link,%
11597     PDFAFlags=4,%
11598     Dest=\Hy@testname
11599 }%
11600 \endgroup
11601 }
11602 \newtoks\pdf@docset
11603 \def\PDF@FinishDoc{%
11604   \Hy@UseMaketitleInfos
11605   \HyInfo@GenerateAddons
11606   \let\Hy@temp\@empty
11607   \ifx\@pdfcreationdate\@empty
11608   \else
11609     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11610   \fi
11611   \ifx\@pdfmoddate\@empty
11612   \else
11613     \expandafter\def\expandafter\Hy@temp\expandafter{%
11614       \Hy@temp
11615       ModDate=\@pdfmoddate,%
11616     }%
11617   \fi
11618   \ifx\@pdfproducer\relax
11619   \else
11620     \expandafter\def\expandafter\Hy@temp\expandafter{%
11621       \Hy@temp
11622       Producer=\@pdfproducer,%
11623     }%
11624   \fi
11625   \expandafter
11626   \pdfmark\expandafter{%
11627     \Hy@temp
11628     pdfmark=/DOCINFO,%
11629     Title=\@pdftitle,%
11630     Subject=\@pdfsubject,%
11631     Creator=\@pdfcreator,%
11632     Author=\@pdfauthor,%
11633     Keywords=\@pdfkeywords,%
11634     Trapped=\@pdftrapped
11635   }%
11636   \ifx\HyInfo@Addons\@empty
11637   \else
11638     \pdfmark{%
11639       pdfmark=/DOCINFO,%
11640       Raw={\HyInfo@Addons}%
11641     }%
11642   \fi
11643   \Hy@DisableOption{pdfauthor}%
11644   \Hy@DisableOption{pdftitle}%

```

```

11645 \Hy@DisableOption{pdfsubject}%
11646 \Hy@DisableOption{pdfcreator}%
11647 \Hy@DisableOption{addtopdfcreator}%
11648 \Hy@DisableOption{pdfcreationdate}%
11649 \Hy@DisableOption{pdfcreationdate}%
11650 \Hy@DisableOption{pdfmoddate}%
11651 \Hy@DisableOption{pdfproducer}%
11652 \Hy@DisableOption{pdfkeywords}%
11653 \Hy@DisableOption{pdftrapped}%
11654 \Hy@DisableOption{pdfinfo}%
11655 }
11656 \def\PDF@SetupDoc{%
11657 \def\Hy@temp{%
11658 \ifx\@pdfstartpage\@empty
11659 \else
11660 \ifx\@pdfstartview\@empty
11661 \else
11662 \edef\Hy@temp{%
11663 ,Page=\@pdfstartpage
11664 ,View=\@pdfstartview
11665 }%
11666 \fi
11667 \fi
11668 \edef\Hy@temp{%
11669 \noexpand\pdfmark{%
11670 pdfmark=/DOCVIEW,%
11671 PageMode=/\@pdfpagemode
11672 \Hy@temp
11673 }%
11674 }%
11675 \Hy@temp
11676 \ifx\@pdfpagescrop\@empty
11677 \else
11678 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11679 \fi
11680 \edef\Hy@temp{%
11681 \ifHy@pdftoolbar\else /HideToolbar true\fi
11682 \ifHy@pdfmenubar\else /HideMenubar true\fi
11683 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11684 \ifHy@pdfwindow /FitWindow true\fi
11685 \ifHy@pdfcenterwindow /CenterWindow true\fi
11686 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11687 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11688 \Hy@UseNameKey{Direction}\@pdfdirection
11689 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11690 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11691 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11692 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11693 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11694 \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

11695 \ifx\@pdfpicktraybypdfsize\@empty
11696 \else
11697 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11698 \fi
11699 \ifx\@pdfprintpagerange\@empty
11700 \else
11701 /PrintPageRange[\@pdfprintpagerange]%
11702 \fi
11703 \ifx\@pdfnumcopies\@empty
11704 \else
11705 /NumCopies \@pdfnumcopies
11706 \fi
11707 }%
11708 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11709 \pdfmark{%
11710 pdfmark=/PUT,%
11711 Raw={%
11712 \string{Catalog\string}<<%
11713 \ifx\Hy@temp\@empty
11714 \else
11715 /ViewerPreferences<<\Hy@temp>>%
11716 \fi
11717 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11718 \ifx\@pdflang\relax
11719 \else
11720 /Lang(\@pdflang)%
11721 \fi
11722 \ifx\@baseurl\@empty
11723 \else
11724 /URI<</Base(\Hy@pstringB)>>%
11725 \fi
11726 >>%
11727 }%
11728 }%
11729 }
11730 </pdfmark>
11731 <*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.

```

11732 \newif\ifHy@pdfmarkerror
11733 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11734 \def\pdfmark@[#1]#2{%
11735 \Hy@pdfmarkerrorfalse
11736 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11737 \@processme

```



```

11738 \let\pdf@type\relax
11739 \let\pdf@objdef\ltx@empty
11740 \kvsetkeys{PDF}{#2}%
11741 \ifHy@pdfmarkerror
11742 \else
11743 \ifx\pdf@type\relax
11744 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11745 \ifx\#1\%
11746 \else
11747 \pdf@rect{#1}%
11748 \fi
11749 \else
11750 \ifx\#1\%
11751 \literalps@out{%
11752 [%
11753 \ifx\pdf@objdef\ltx@empty
11754 \else
11755 /__objdef\string{\pdf@objdef\string}%
11756 \fi
11757 \the\pdf@toks\space\pdf@type\space pdfmark%
11758 }%
11759 \else
11760 \ltx@ifundefined{@\pdf@linktype color}{%
11761 \Hy@colorlink\@linkcolor
11762 }{%
11763 \expandafter\Hy@colorlink
11764 \csname @\pdf@linktype color\endcsname
11765 }%
11766 \pdf@rect{#1}%
11767 \literalps@out{%
11768 [%
11769 \ifx\pdf@objdef\ltx@empty
11770 \else
11771 /__objdef\string{\pdf@objdef\string}%
11772 \fi
11773 \the\pdf@toks\space\pdf@type\space pdfmark%
11774 }%
11775 \Hy@endcolorlink
11776 \fi
11777 \fi
11778 \fi
11779 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

`\usepackage[hyperref]{setouterhbox}`

With the second hook, also you can set the text twice, e.g.:

```
\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}
```

```
11780 \newsavebox{\pdf@box}
11781 \providecommand*{\Hy@setouterhbox}{\sbox}
11782 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11783 \def\Hy@DEST{/DEST}
11784 \def\pdf@rect#1{%
11785   \begingroup
11786   \chardef\x=1 %
11787   \def\Hy@temp{#1}%
11788   \ifx\Hy@temp\ltx@empty
11789     \chardef\x=0 %
11790   \else
11791     \def\y{\anchor@spot}%
11792     \ifx\Hy@temp\y
11793       \def\y{\relax}%
11794       \ifx\anchor@spot\y
11795         \chardef\x=0 %
11796       \fi
11797     \fi
11798   \fi
11799   \expandafter\endgroup
11800   \ifcase\x
11801     \literalps@out{H.S}%
11802     \literalps@out{H.R}%
11803   \else
11804     \leavevmode
11805     \Hy@SaveSpaceFactor
11806     \ifmmode
11807       \def\Hy@LinkMath{$}%
11808     \else
11809       \let\Hy@LinkMath\ltx@empty
11810     \fi
11811     \ifHy@breaklinks
11812       \Hy@setouterhbox\pdf@box{%
11813         \Hy@RestoreSpaceFactor
11814         \Hy@LinkMath
11815         \Hy@AllowHyphens#1\Hy@xspace@end
11816         \Hy@LinkMath
11817         \Hy@SaveSpaceFactor
11818       }%
11819     \else
11820       \sbox\pdf@box{%
11821         \Hy@RestoreSpaceFactor
11822         \Hy@LinkMath
11823         #1\Hy@xspace@end
```

```

11824 \Hy@LinkMath
11825 \Hy@SaveSpaceFactor
11826 }%
11827 \fi
11828 \dimen@ \ht \pdf@box
11829 \ifdim \dp \pdf@box = \z@
11830 \literalps@out{H.S}%
11831 \else
11832 \lower \dp \pdf@box \hbox{\literalps@out{H.S}}%
11833 \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...).

```

11834 \ifHy@breaklinks
11835 \ifhmode
11836 \Hy@breaklinksunhbox \pdf@box
11837 \else
11838 \box \pdf@box
11839 \fi
11840 \else
11841 \expandafter \box \pdf@box
11842 \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

11843 \ifdim \dimen@ = \z@
11844 \literalps@out{H.R}%
11845 \else
11846 \raise \dimen@ \hbox{\literalps@out{H.R}}%
11847 \fi
11848 \Hy@RestoreSpaceFactor
11849 \fi
11850 \ifx \pdf@type \Hy@DEST
11851 \else
11852 \pdf@addtoksx{H.B}%
11853 \fi
11854 }

```

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.

```

11855 \newtoks \pdf@toks
11856 \newtoks \pdf@defaulttoks
11857 \pdf@defaulttoks = {}%
11858 \def \pdf@addtoks#1#2{%
11859 \edef \@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11860 \@processme

```

```

11861 }
11862 \def\pdf@addtoksx#1{%
11863   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11864   \@processme
11865 }
11866 \def\PDFdefaults#1{%
11867   \pdf@defaulttoks={#1}%
11868 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11869 % what is the type of pdfmark?
11870 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11871 % what is the link type?
11872 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11873 \def\pdf@linktype{link}
11874 % named object?
11875 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11876 \let\pdf@objdef\ltx@empty
11877 % parameter is a stream of PDF
11878 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11879 % parameter is a name
11880 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11881 % parameter is a array
11882 \define@key{PDF}{Border}{%
11883   \edef\Hy@temp{#1}%
11884   \ifx\Hy@temp\@empty
11885     \else
11886       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11887     \fi
11888 }
11889 \let\Hy@BorderArrayPatch\@empty
11890 % parameter is a dictionary
11891 \define@key{PDF}{BorderStyle}{%
11892   \edef\Hy@temp{#1}%
11893   \ifx\Hy@temp\@empty
11894     \else
11895       \pdf@addtoks{<<#1>>}{BS}%
11896     \fi
11897 }
11898 % parameter is a array
11899 \define@key{PDF}{Color}{%
11900   \ifx\relax#1\relax
11901     \else
11902       \pdf@addtoks{[#1]}{Color}% hash-ok
11903     \fi
11904 }
11905 % parameter is a string
11906 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11907 % parameter is a integer
11908 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}

```

```

11909 % parameter is a array
11910 \define@key{PDF}{CropBox}{\pdf@addtoks{(#1)}{CropBox}}% hash-ok
11911 % parameter is a string
11912 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11913 % parameter is a string or file
11914 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11915 % parameter is a destination
11916 \define@key{PDF}{Dest}{%
11917   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11918   \ifx\Hy@pstringDest\@empty
11919     \Hy@pdfmarkerrortrue
11920     \Hy@Warning{Destination with empty name ignored}%
11921   \else
11922     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11923   \fi
11924 }
11925 \define@key{PDF}{DestAnchor}{%
11926   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11927   \ifx\Hy@pstringDest\@empty
11928     \Hy@pdfmarkerrortrue
11929     \Hy@Warning{Destination with empty name ignored}%
11930   \else
11931     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11932   \fi
11933 }
11934 % parameter is a string
11935 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11936 % parameter is a string
11937 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11938 % parameter is a int
11939 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11940 \define@key{PDF}{PDFAFlags}{%
11941   \ifHy@pdfa
11942     \pdf@addtoks{#1}{F}%
11943   \fi
11944 }
11945 % parameter is a name
11946 \define@key{PDF}{AcroHighlight}{%
11947   \begingroup
11948     \edef\x{#1}%
11949     \expandafter\endgroup\ifx\x\@empty
11950     \else
11951       \pdf@addtoks{#1}{H}%
11952     \fi
11953 }
11954 % parameter is a string
11955 \define@key{PDF}{ID}{\pdf@addtoks{(#1)}{ID}}% hash-ok
11956 % parameter is a string
11957 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11958 % parameter is a string

```

```

11959 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11960 % parameter is a string
11961 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11962 % parameter is a Boolean
11963 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11964 % parameter is a integer or name
11965 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11966 % parameter is a name
11967 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11968 % parameter is a string
11969 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11970 % parameter is a array
11971 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11972 % parameter is a integer
11973 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11974 % parameter is a name
11975 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11976 % parameter is a string
11977 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11978 % parameter is a string
11979 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11980 % parameter is a string
11981 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11982 % parameter is an array
11983 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11984 % parameter is a string
11985 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11986 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11987 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11988 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11989 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11990 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11991 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11992 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11993 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11994 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11995 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11996 \define@key{PDF}{Trapped}{%
11997   \edef\Hy@temp{#1}%
11998   \ifx\Hy@temp\@empty
11999     \else
12000       \pdf@addtoks{/#1}{Trapped}%
12001     \fi
12002 }
12003
12004 </pdfmarkbase>
12005 <*pdfmark>
12006 \def\Acrobatmenu#1#2{%

```

```

12007 \EdefEscapeName\Hy@temp@menu{#1}%
12008 \Hy@Acrobatmenu{#1}{#2}{%
12009   \pdfmark[{#2}]{%
12010     linktype=menu,%
12011     pdfmark=/ANN,%
12012     AcroHighlight=\@pdfhighlight,%
12013     Border=\@pdfborder,%
12014     BorderStyle=\@pdfborderstyle,%
12015     Color=\@menubordercolor,%
12016     Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12017     Subtype=/Link,%
12018     PDFAFlags=4%
12019   }%
12020 }%
12021 }

```

And now for some useful examples:

```

12022 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12023 \def\PDFNextPage@[#1]#2{%
12024   \pdfmark[{#2}]{%
12025     #1,%
12026     Border=\@pdfborder,%
12027     BorderStyle=\@pdfborderstyle,%
12028     Color=.2 .1 .5,%
12029     pdfmark=/ANN,%
12030     Subtype=/Link,%
12031     PDFAFlags=4,%
12032     Page=/Next%
12033   }%
12034 }
12035 \def\PDFPreviousPage{%
12036   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12037 }
12038 \def\PDFPreviousPage@[#1]#2{%
12039   \pdfmark[{#2}]{%
12040     #1,%
12041     Border=\@pdfborder,%
12042     BorderStyle=\@pdfborderstyle,%
12043     Color=.4 .4 .1,%
12044     pdfmark=/ANN,%
12045     Subtype=/Link,%
12046     PDFAFlags=4,%
12047     Page=/Prev%
12048   }%
12049 }
12050 \def\PDFOpen#1{%
12051   \pdfmark{#1,pdfmark=/DOCVIEW}%
12052 }

```

This will only work if you use Distiller 2.1 or higher.

```

12053 \def\hyper@linkurl#1#2{%

```

```

12054 \begingroup
12055 \Hy@pstringdef\Hy@pstringURI{#2}%
12056 \hyper@chars
12057 \leavevmode
12058 \pdfmark[{#1}]{%
12059 pdfmark=/ANN,%
12060 linktype=url,%
12061 AcroHighlight=\@pdfhighlight,%
12062 Border=\@pdfborder,%
12063 BorderStyle=\@pdfborderstyle,%
12064 Color=\@urlbordercolor,%
12065 Action={<<%
12066 /Subtype/URI%
12067 /URI(\Hy@pstringURI)%
12068 \ifHy@href@ismap
12069 /IsMap true%
12070 \fi
12071 >>},%
12072 Subtype=/Link,%
12073 PDFAFlags=4%
12074 }%
12075 \endgroup
12076 }
12077 \def\hyper@linkfile#1#2#3{%
12078 \begingroup
12079 \def\Hy@pstringF{#2}%
12080 \Hy@CleanupFile\Hy@pstringF
12081 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12082 \Hy@pstringdef\Hy@pstringD{#3}%
12083 \Hy@MakeRemoteAction
12084 \leavevmode
12085 \pdfmark[{#1}]{%
12086 pdfmark=/ANN,%
12087 Subtype=/Link,%
12088 PDFAFlags=4,%
12089 AcroHighlight=\@pdfhighlight,%
12090 Border=\@pdfborder,%
12091 BorderStyle=\@pdfborderstyle,%
12092 linktype=file,%
12093 Color=\@filebordercolor,%
12094 Action={%
12095 <<%
12096 /S/GoToR%
12097 \Hy@SetNewWindow
12098 /F(\Hy@pstringF)%
12099 /D%
12100 \ifx\#3\%
12101 [\Hy@href@page\@pdfremotestartview]%
12102 \else
12103 (\Hy@pstringD)cvn%

```



```

12104      \fi
12105      \Hy@href@nextactionraw
12106      >>%
12107    }%
12108  }%
12109 \endgroup
12110 }
12111 \def\@hyper@launch run:#1\#2#3{%
12112 \begingroup
12113 \Hy@pstringdef\Hy@pstringF{#1}%
12114 \Hy@pstringdef\Hy@pstringP{#3}%
12115 \leavevmode
12116 \pdfmark[{#2}]{%
12117   pdfmark=/ANN,%
12118   Subtype=/Link,%
12119   PDFAFlags=4,%
12120   AcroHighlight=\@pdfhighlight,%
12121   Border=\@pdfborder,%
12122   BorderStyle=\@pdfborderstyle,%
12123   linktype=run,%
12124   Color=\@runbordercolor,%
12125   Action={%
12126     <<%
12127     /S/Launch%
12128     \Hy@SetNewWindow
12129     /F(\Hy@pstringF)%
12130     \ifx\#3\%
12131     \else
12132       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12133     \fi
12134     \Hy@href@nextactionraw
12135     >>%
12136   }%
12137 }%
12138 \endgroup
12139 }
12140 \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.

```

12141 <*dvips>
12142 \providecommand*{\XR@ext}{pdf}
12143 \let\Hy@raisedlink\ltx@empty

```

```

12144 \def\literalps@out#1{\special{ps:SDict begin #1 end}}}%
12145 \def\headerps@out#1{\special{! #1}}}%
12146 \input{pdfmark.def}%
12147 \ifx\@pdfproducer\relax
12148   \def\@pdfproducer{dvips + Distiller}%
12149 \fi
12150 \providecommand*\@pdfborder{0 0 1}
12151 \providecommand*\@pdfborderstyle{}
12152 \providecommand*\@pdfview{XYZ}
12153 \providecommand*\@pdfviewparams{ H.V}
12154 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12155 \g@addto@macro\Hy@FirstPageHook{%
12156   \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.

```

12157   /DvipsToPDF{72.27 mul Resolution div} def%
12158   /PDFToDvips{72.27 div Resolution mul} def%
12159   /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.

```

12160   product (Ghostscript) search {pop pop pop revision 927 gt}%
12161   {pop false} ifelse%
12162   {%
12163     /BorderArrayPatch{} def%
12164   }%
12165   {%
12166     /BorderArrayPatch{%
12167       [exch{%
12168         dup dup type/integertype eq exch type/realtype eq or%
12169         {BPToDvips}if%
12170       }forall]%

```

```

12171    }def%
12172  } 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.

```

12173  /HyperBorder {1 PDFToDvips} def%
12174  /H.V {pdf@hoff pdf@voff null} def%
12175  /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

```

12176  /H.S {%
12177    currentpoint %
12178    HyperBorder add /pdf@lly exch def %
12179    dup DvipsToPDF 72 add /pdf@hoff exch def %
12180    HyperBorder sub /pdf@llx exch def%
12181  } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```

12182  /H.L {%
12183    2 sub dup%
12184    /HyperBasePt exch def %
12185    PDFToDvips /HyperBaseDvips exch def %
12186    currentpoint %
12187    HyperBaseDvips sub /pdf@ury exch def%
12188    /pdf@urx exch def%
12189  } def%
12190  /H.A {%
12191    H.L %
12192    % | /pdf@voff| = the distance from the top of the page to a point
12193    % | \baselineskip| above the current point in PDF coordinates
12194    currentpoint exch pop %
12195    vsize 72 sub exch DvipsToPDF %
12196    HyperBasePt sub % baseline skip
12197    sub /pdf@voff exch def%
12198  } def%
12199  /H.R {%
12200    currentpoint %
12201    HyperBorder sub /pdf@ury exch def %
12202    HyperBorder add /pdf@urx exch def %
12203    % | /pdf@voff| = the distance from the top of the page to the current point, in
12204    % PDF coordinates
12205    currentpoint exch pop vsize 72 sub %
12206    exch DvipsToPDF sub /pdf@voff exch def%

```

```

12207   } def%
12208 }%
12209 }
12210 \AtBeginShipoutFirst{%
12211   \ifHy@setpagesize
12212     \begingroup
12213     \@ifundefined{stockwidth}{%
12214       \ifdim\paperwidth>\z@
12215         \ifdim\paperheight>\z@
12216           \special{papersize=\the\paperwidth,\the\paperheight}%
12217         \fi
12218       \fi
12219     }{%
12220       \ifdim\stockwidth>\z@
12221         \ifdim\stockheight>\z@
12222           \special{papersize=\the\stockwidth,\the\stockheight}%
12223         \fi
12224       \fi
12225     }%
12226   \endgroup
12227 \fi
12228 \Hy@DisableOption{setpagesize}%
12229 }

12230 \def\setpdfinkmargin#1{%
12231   \begingroup
12232   \setlength{\dimen@}{#1}%
12233   \literalps@out{%
12234     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12235   }%
12236   \endgroup
12237 }

12238 </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.

```

12239 <*vtexpdfmark>
12240 \providecommand*\XR@ext}{pdf}
12241 \let\Hy@raisedlink\ltx@empty
12242 \def\literalps@out#1{\special{pS:#1}}%
12243 \def\headerps@out#1{\immediate\special{pS:#1}}%
12244 \input{pdfmark.def}%
12245 \ifx\@pdfproducer\relax
12246   \ifnum\OpMode=\@ne
12247     \def\@pdfproducer{VTeX}%

```

```

12248 \else
12249   \def\@pdfproducer{VTeX + Distiller}%
12250 \fi
12251 \fi
12252 \providecommand*\@pdfborder{0 0 1}
12253 \providecommand*\@pdfborderstyle{}
12254 \providecommand*\@pdfview{XYZ}
12255 \providecommand*\@pdfviewparams{ H.V}

12256 \g@addto@macro\Hy@FirstPageHook{%
12257   \headerps@out{%
12258     /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.

```

12259   /HyperBorder {1} def%
12260   /H.V {pdf@hoff pdf@voff null} def%
12261   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12262   /H.S {%
12263     currentpoint %
12264     HyperBorder sub%
12265     /pdf@lly exch def %
12266     dup 72 add /pdf@hoff exch def %
12267     HyperBorder sub%
12268     /pdf@llx exch def%
12269   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12270   /H.L {%
12271     2 sub%
12272     /HyperBasePt exch def %
12273     currentpoint %
12274     HyperBasePt add HyperBorder add%
12275     /pdf@ury exch def %
12276     HyperBorder add%
12277     /pdf@urx exch def%
12278   } def%
12279   /H.A {%
12280     H.L %
12281     currentpoint exch pop %
12282     vsize 72 sub exch %
12283     HyperBasePt add add%
12284     /pdf@voff exch def%
12285   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12286 /H.R {%
12287   currentpoint %
12288   HyperBorder add%
12289   /pdf@ury exch def %
12290   HyperBorder add%
12291   /pdf@urx exch def %
12292   currentpoint exch pop vsize 72 sub add%
12293   /pdf@voff exch def%
12294 } def%
12295 }%
12296 }

12297 \def\setpdfinkmargin#1{%
12298   \begingroup
12299   \setlength{\dimen@}{#1}%
12300   \literalps@out{%
12301     /HyperBorder{\strip@pt\dimen@}def%
12302   }%
12303   \endgroup
12304 }

12305 \</vtexpdfmark>

```

47.11 Textures

```

12306 \<*textures>
12307 \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.

```

12308 \begingroup
12309   \obeylines %
12310   \gdef\Hy@ps@CR{\noexpand
12311   }%
12312 \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`.

```
12313 \def\literalps@out#1{%
12314   \special{postscript 0 0 transform}%
12315   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12316 }%
12317 %
```

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.

```
12318 \def\headerps@out#1{%
12319   \special{%
12320     prepostscript TeXdict begin\Hy@ps@CR
12321       #1\Hy@ps@CR
12322     end%
12323   }%
12324 }%
12325 %
```

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.

```
12326 \g@addto@macro\Hy@FirstPageHook{%
12327   \headerps@out{%
12328     /betterpdfmark {%
12329       systemdict begin %
12330       dup /BP eq%
12331       {cleartomark gsave nulldevice []%
12332       {dup /EP eq%
12333         {cleartomark cleartomark grestore}%
12334         {cleartomark}%
12335       }ifelse%
12336     }ifelse %
12337   end%
12338 }def\Hy@ps@CR
12339 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12340 }% end of \headerps@out
12341 }% end of \AtBeginShipoutFirst
12342 %
12343 \input{pdfmark.def}%
12344 %
12345 \ifx\@pdfproducer\relax
12346   \def\@pdfproducer{Textures + Distiller}%
12347 \fi
12348 \providecommand*\@pdfborder{0 0 1}
12349 \providecommand*\@pdfborderstyle{}
12350 \providecommand*\@pdfview{XYZ}
12351 \providecommand*\@pdfviewparams{ H.V}
```

12352 %

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 .

```
12353 \Hy@AtBeginDocument{%
12354 \headerps@out{%
```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```
12355 /vsize {\Hy@pageheight} def%
12356 /DvipsToPDF {} def%
12357 /PDFToDvips {} def%
12358 /BPToDvips {} def%
12359 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12360 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12361 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12362 /H.S {%
12363   currentpoint %
12364   HyperBorder add /pdf@lly exch def %
12365   dup DvipsToPDF 72 add /pdf@hoff exch def %
12366   HyperBorder sub /pdf@llx exch def%
12367 } def\Hy@ps@CR
12368 /H.L {%
12369   2 sub %
12370   PDFToDvips /HyperBase exch def %
12371   currentpoint %
12372   HyperBase sub /pdf@ury exch def%
12373   /pdf@urx exch def%
12374 } def\Hy@ps@CR
12375 /H.A {%
12376   H.L %
12377   currentpoint exch pop %
12378   vsize 72 sub exch DvipsToPDF %
12379   HyperBase sub % baseline skip
12380   sub /pdf@voff exch def%
12381 } def\Hy@ps@CR
12382 /H.R {%
12383   currentpoint %
12384   HyperBorder sub /pdf@ury exch def %
12385   HyperBorder add /pdf@urx exch def %
12386   currentpoint exch pop vsize 72 sub %
12387   exch DvipsToPDF sub /pdf@voff exch def%
12388 } def\Hy@ps@CR
12389 }%
12390 }
12391 \def\setpdfinkmargin#1{%
```



```

12392 \begingroup
12393 \setlength{\dimen@}{#1}%
12394 \literalps@out{%
12395   /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12396 }%
12397 \endgroup
12398 }
12399 \Hy@AtBeginDocument{%
12400 \ifHy@colorlinks
12401 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12402 \fi
12403 }

```

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.

```

12404 \expandafter\let\expandafter\keepPDF@SetupDoc
12405 \csname PDF@SetupDoc\endcsname
12406 \def\PDF@SetupDoc{%
12407 \ifx\@baseurl\@empty
12408 \else
12409 \special{html:<base href="\@baseurl">}%
12410 \fi
12411 \keepPDF@SetupDoc
12412 }
12413 \Hy@WrapperDef\hyper@anchor#1{%
12414 \Hy@SaveLastskip
12415 \Hy@VerboseAnchor{#1}%
12416 \begingroup
12417 \let\protect=\string
12418 \special{html:<a name=%
12419 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12420 \endgroup
12421 \Hy@activeanchortrue
12422 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12423 \special{html:</a>}%
12424 \Hy@activeanchorfalse
12425 \Hy@RestoreLastskip
12426 }
12427 \Hy@WrapperDef\hyper@anchorstart#1{%
12428 \Hy@SaveLastskip
12429 \Hy@VerboseAnchor{#1}%
12430 \begingroup
12431 \hyper@chars
12432 \special{html:<a name=%
12433 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12434 \endgroup
12435 \Hy@activeanchortrue
12436 }
12437 \def\hyper@anchorend{%

```

```

12438 \special{html:</a>}}%
12439 \Hy@activeanchorfalse
12440 \Hy@RestoreLastskip
12441 }
12442 \def\@urltype{url}
12443 \def\hyper@linkstart#1#2{%
12444 \Hy@VerboseLinkStart{#1}{#2}%
12445 \expandafter\Hy@colorlink\csname @#1color\endcsname
12446 \def\Hy@tempa{#1}%
12447 \ifx\Hy@tempa\@urltype
12448 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12449 \else
12450 \begingroup
12451 \hyper@chars
12452 \special{%
12453 html:<a href=%
12454 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
12455 }%
12456 \endgroup
12457 \fi
12458 }
12459 \def\hyper@linkend{%
12460 \special{html:</a>}}%
12461 \Hy@endcolorlink
12462 }
12463 \def\hyper@linkfile#1#2#3{%
12464 \hyper@linkurl{#1}{%
12465 \Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi
12466 }%
12467 }
12468 \def\hyper@linkurl#1#2{%
12469 \leavevmode
12470 \ifHy@raiselinks
12471 \Hy@SaveSpaceFactor
12472 \Hy@SaveSavedSpaceFactor
12473 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12474 \Hy@RestoreSavedSpaceFactor
12475 \@linkdim\dp\@tempboxa
12476 \lower\@linkdim\hbox{%
12477 \hyper@chars
12478 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12479 }%
12480 \Hy@colorlink\@urlcolor
12481 \Hy@RestoreSpaceFactor
12482 #1\Hy@xspace@end
12483 \Hy@SaveSpaceFactor
12484 \@linkdim\ht\@tempboxa
12485 \advance\@linkdim by -6.5p@
12486 \raise\@linkdim\hbox{\special{html:</a>}}%
12487 \Hy@endcolorlink

```

```

12488 \Hy@RestoreSpaceFactor
12489 \else
12490 \begingroup
12491 \hyper@chars
12492 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12493 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12494 \special{html:</a>}%
12495 \Hy@endcolorlink
12496 \endgroup
12497 \fi
12498 }

```

Very poor implementation of \hyper@link without considering #1.

```

12499 \def\hyper@link#1#2#3{%
12500 \Hy@VerboseLinkStart{#1}{#2}%
12501 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12502 }
12503 \def\hyper@image#1#2{%
12504 \begingroup
12505 \hyper@chars
12506 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12507 \endgroup
12508 }
12509 </textures>

```

47.12 dvipsone

```

12510 % \subsection{dvipsone driver}
12511 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12512 % |\special| commands.
12513 <*dvipsone>
12514 \providecommand*\XR@ext}{pdf}
12515 \let\Hy@raisedlink\ltx@empty
12516 \providecommand*\@pdfborder{0 0 1}
12517 \providecommand*\@pdfborderstyle{}
12518 \def\literalps@out#1{\special{ps:#1}}%
12519 \def\headerps@out#1{\special{headertext=#1}}%
12520 \input{pdfmark.def}%
12521 \HyInfo@AddonUnsupportedtrue
12522 \def\PDF@FinishDoc{%
12523 \Hy@UseMaketitleInfos
12524 \HyInfo@TrappedUnsupported
12525 \special{PDF: Keywords \@pdfkeywords}%
12526 \special{PDF: Title \@pdftitle}%
12527 \special{PDF: Creator \@pdfcreator}%
12528 \ifx\@pdfcreationdate\@empty
12529 \else
12530 \special{PDF: CreationDate \@pdfcreationdate}%
12531 \fi
12532 \ifx\@pdfmoddate\@empty

```

```

12533 \else
12534 \special{PDF: ModDate \@pdfmoddate}%
12535 \fi
12536 \special{PDF: Author \@pdfauthor}%
12537 \ifx\@pdfproducer\relax
12538 \else
12539 \special{PDF: Producer \@pdfproducer}%
12540 \fi
12541 \special{PDF: Subject \@pdfsubject}%
12542 \Hy@DisableOption{pdfauthor}%
12543 \Hy@DisableOption{pdftitle}%
12544 \Hy@DisableOption{pdfsubject}%
12545 \Hy@DisableOption{pdfcreator}%
12546 \Hy@DisableOption{addtopdfcreator}%
12547 \Hy@DisableOption{pdfcreationdate}%
12548 \Hy@DisableOption{pdfcreationdate}%
12549 \Hy@DisableOption{pdfmoddate}%
12550 \Hy@DisableOption{pdfproducer}%
12551 \Hy@DisableOption{pdfkeywords}%
12552 \Hy@DisableOption{pdftrapped}%
12553 \Hy@DisableOption{pdfinfo}%
12554 }
12555 \def\PDF@SetupDoc{%
12556 \def\Hy@temp{}%
12557 \ifx\@pdfstartpage\@empty
12558 \else
12559 \ifx\@pdfstartview\@empty
12560 \else
12561 \edef\Hy@temp{%
12562 ,Page=\@pdfstartpage
12563 ,View=\@pdfstartview
12564 }%
12565 \fi
12566 \fi
12567 \edef\Hy@temp{%
12568 \noexpand\pdfmark{%
12569 pdfmark=/DOCVIEW,%
12570 PageMode=/\@pdfpagemode
12571 \Hy@temp
12572 }%
12573 }%
12574 \Hy@temp
12575 \ifx\@pdfpagescrop\@empty
12576 \else
12577 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12578 \fi
12579 \edef\Hy@temp{%
12580 \ifHy@pdftoolbar\else /HideToolbar true\fi
12581 \ifHy@pdfmenubar\else /HideMenubar true\fi
12582 \ifHy@pdfwindowui\else /HideWindowUI true\fi

```

```

12583 \ifHy@pdffitwindow /FitWindow true\fi
12584 \ifHy@pdfcenterwindow /CenterWindow true\fi
12585 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12586 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12587 \Hy@UseNameKey{Direction}\@pdfdirection
12588 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12589 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12590 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12591 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12592 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12593 \Hy@UseNameKey{Duplex}\@pdfduplex
12594 \ifx\@pdfpicktraybypdfsize\@empty
12595 \else
12596 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12597 \fi
12598 \ifx\@pdfprintpagerange\@empty
12599 \else
12600 /PrintPageRange[\@pdfprintpagerange]%
12601 \fi
12602 \ifx\@pdfnumcopies\@empty
12603 \else
12604 /NumCopies \@pdfnumcopies
12605 \fi
12606 }%
12607 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12608 \pdfmark{%
12609 pdfmark=/PUT,%
12610 Raw={%
12611 \string{Catalog\string}<<%
12612 \ifx\Hy@temp\@empty
12613 \else
12614 /ViewerPreferences<<\Hy@temp>>%
12615 \fi
12616 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12617 \ifx\@pdflang\relax
12618 \else
12619 /Lang(\@pdflang)%
12620 \fi
12621 \ifx\@baseurl\@empty
12622 \else
12623 /URI<</Base(\Hy@pstringB)>>%
12624 \fi
12625 >>%
12626 }%
12627 }%
12628 }
12629 \providecommand*\@pdfview{XYZ}
12630 \providecommand*\@pdfviewparams{ %
12631 gsave revscl currentpoint grestore %
12632 72 add exch pop null exch null%

```

```

12633 }
12634 \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 .

```

12635 \g@addto@macro\Hy@FirstPageHook{%
12636 \headerps@out{%

```

`dvipsone` lives in scaled points; does this mean 65536 or 65781?

```

12637 /DvipsToPDF { 65781 div } def%
12638 /PDFToDvips { 65781 mul } def%
12639 /BPToDvips{65781 mul}def%
12640 /HyperBorder { 1 PDFToDvips } def%
12641 /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.

```

12642 /BorderArrayPatch{%
12643   [exch{%
12644     dup dup type/integertype eq exch type/realtype eq or%
12645     {BPToDvips}if%
12646   }forall]%
12647 }def%

12648 /H.S {%
12649   currentpoint %
12650   HyperBorder add /pdf@lly exch def %
12651   dup DvipsToPDF 72 add /pdf@hoff exch def %
12652   HyperBorder sub /pdf@llx exch def%
12653 } def%
12654 /H.L {%
12655   2 sub %
12656   PDFToDvips /HyperBase exch def %
12657   currentpoint %
12658   HyperBase sub /pdf@ury exch def%
12659   /pdf@urx exch def%
12660 } def%
12661 /H.A {%
12662   H.L %
12663   currentpoint exch pop %
12664   HyperBase sub % baseline skip
12665   DvipsToPDF /pdf@voff exch def%
12666 } def%
12667 /H.R {%
12668   currentpoint %
12669   HyperBorder sub /pdf@ury exch def %
12670   HyperBorder add /pdf@urx exch def %
12671   currentpoint exch pop DvipsToPDF /pdf@voff exch def%

```

```

12672 } def%
12673 }%
12674 }

12675 \def\setpdfinkmargin#1{%
12676 \begingroup
12677 \setlength{\dimen@}{#1}%
12678 \literalps@out{%
12679 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12680 }%
12681 \endgroup
12682 }

12683 </dvipsone>

```

47.13 TeX4ht

```

12684 <*tex4ht>
12685 \providecommand*\XR@ext>{html}
12686 \let\Hy@raisedlink\ltx@empty
12687 \@ifpackageloaded{tex4ht}{%
12688 \Hy@InfoNoLine{tex4ht is already loaded}%
12689 }{%
12690 \RequirePackage[hTeX4ht]{tex4ht}%
12691 }
12692 \hyperlinkfileprefix{}
12693 \let\PDF@FinishDoc\ltx@empty
12694 \def\PDF@SetupDoc{%
12695 \ifx\@baseurl\@empty
12696 \else
12697 \special{t4ht=<base href="\@baseurl">}%
12698 \fi
12699 }
12700 \Hy@WrapperDef\hyper@anchor#1{%
12701 \Hy@SaveLastskip
12702 \Hy@VerboseAnchor{#1}%
12703 \begingroup
12704 \let\protect=\string
12705 \special{t4ht=<a name=%
12706 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12707 \endgroup
12708 \Hy@activeanchortrue
12709 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12710 \special{t4ht=</a>}%
12711 \Hy@activeanchorfalse
12712 \Hy@RestoreLastskip
12713 }
12714 \Hy@WrapperDef\hyper@anchorstart#1{%
12715 \Hy@SaveLastskip
12716 \Hy@VerboseAnchor{#1}%
12717 \begingroup
12718 \hyper@chars\special{t4ht=<a name=%

```

```

12719     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12720 \endgroup
12721 \Hy@activeanchortrue
12722 }
12723 \def\hyper@anchorend{%
12724 \special{t4ht=</a>}%
12725 \Hy@activeanchorfalse
12726 \Hy@RestoreLastskip
12727 }
12728 \def\@urltype{url}
12729 \def\hyper@linkstart#1#2{%
12730 \Hy@VerboseLinkStart{#1}{#2}%
12731 \expandafter\Hy@colorlink\csname @#1color\endcsname
12732 \def\Hy@tempa{#1}%
12733 \ifx\Hy@tempa\@urltype
12734 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12735 \else
12736 \begingroup
12737 \hyper@chars
12738 \special{t4ht=<a href=%
12739 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12740 \endgroup
12741 \fi
12742 }
12743 \def\hyper@linkend{%
12744 \special{t4ht=</a>}%
12745 \Hy@endcolorlink
12746 }
12747 \def\hyper@linkfile#1#2#3{%
12748 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
12749 }
12750 \def\hyper@linkurl#1#2{%
12751 \leavevmode
12752 \ifHy@raiselinks
12753 \Hy@SaveSpaceFactor
12754 \Hy@SaveSavedSpaceFactor
12755 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12756 \Hy@RestoreSavedSpaceFactor
12757 \@linkdim\dp\@tempboxa
12758 \lower\@linkdim\hbox{%
12759 \begingroup
12760 \hyper@chars
12761 \special{%
12762 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12763 }%
12764 \endgroup
12765 }%
12766 \Hy@colorlink\@urlcolor
12767 \Hy@RestoreSpaceFactor
12768 #1\Hy@xspace@end

```



```

12769 \Hy@SaveSpaceFactor
12770 \Hy@endcolorlink
12771 \@linkdim\ht\@tempboxa
12772 \advance\@linkdim by -6.5\p@
12773 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12774 \Hy@RestoreSpaceFactor
12775 \else
12776 \begingroup
12777 \hyper@chars
12778 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12779 \Hy@colorlink\@urlcolor
12780 #1\Hy@xspace@end
12781 \Hy@endcolorlink
12782 \special{t4ht=</a>}%
12783 \endgroup
12784 \fi
12785 }

```

Poor implementation of `\hyper@link` without considering `#1`.

```

12786 \def\hyper@link#1#2#3{%
12787 \Hy@VerboseLinkStart{#1}{#2}%
12788 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
12789 }
12790 \def\hyper@image#1#2{%
12791 \begingroup
12792 \hyper@chars
12793 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12794 \endgroup
12795 }
12796 \let\autoref\ref
12797 \ifx \rEfLiNK \UnDef
12798 \def\rEfLiNK #1#2{#2}%
12799 \fi
12800 \let\backref\ltx@gobble

```

Fix for `tex4ht`.

```

12801 \AtBeginDocument{%
12802 \expandafter
12803 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12804 \expandafter\def\csname Make:Label\endcsname#1#2{%
12805 \ifhmode
12806 \Hy@SaveSpaceFactor
12807 \else
12808 \global\Hy@SavedSpaceFactor=1000 %
12809 \fi
12810 \Hy@OrgMakeLabel{#1}{%
12811 \Hy@RestoreSpaceFactor
12812 #2\Hy@xspace@end%
12813 \Hy@SaveSpaceFactor
12814 }%
12815 \Hy@RestoreSpaceFactor

```

```

12816 }%
12817 }
12818 </tex4ht>
12819 <*tex4htcfg>
12820 \IfFileExists{\jobname.cfg}{\endinput}{}
12821 \Preamble{html}
12822 \begin{document}%
12823 \EndPreamble
12824 \def\TeX{\TeX}
12825 \def\OMEGA{\Omega}
12826 \def\LaTeX{\LaTeX}
12827 \def\LaTeXe{\LaTeXe}
12828 \def\eTeX{e-TeX}
12829 \def\MF{Metafont}
12830 \def\MP{MetaPost}
12831 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12832 <*pdfmark>
12833 \long\def\@Form[#1]{%
12834 \g@addto@macro\Hy@FirstPageHook{%
12835 \headerps@out{%
12836 [%
12837 /_objdef{pdfDocEncoding}%
12838 /type/dict%
12839 /OBJ pdfmark%
12840 [%
12841 {pdfDocEncoding}%
12842 <<%
12843 /Type/Encoding%
12844 /Differences%
12845 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12846 /tilde %
12847 39/quotesingle %
12848 96/grave %
12849 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12850 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12851 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12852 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12853 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12854 160/Euro %
12855 164/currency %
12856 166/brokenbar %
12857 168/dieresis/copyright/ordfeminine %
12858 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12859 /twosuperior/threesuperior/acute/mu %

```

12860 183/periodcentered/cedilla/onesuperior/ordmasculine %
12861 188/onequarter/onehalf/threequarters %
12862 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12863 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12864 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12865 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12866 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12867 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12868 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12869 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12870 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12871 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12872]%
12873 >>%
12874 /PUT pdfmark%
12875 [%
12876 /_objdef{ZaDb}%
12877 /type/dict%
12878 /OBJ pdfmark%
12879 [%
12880 {ZaDb}%
12881 <<%
12882 /Type/Font%
12883 /Subtype/Type1%
12884 /Name/ZaDb%
12885 /BaseFont/ZapfDingbats%
12886 >>%
12887 /PUT pdfmark%
12888 [%
12889 /_objdef{Helv}%
12890 /type/dict%
12891 /OBJ pdfmark%
12892 [%
12893 {Helv}%
12894 <<%
12895 /Type/Font%
12896 /Subtype/Type1%
12897 /Name/Helv%
12898 /BaseFont/Helvetica%
12899 /Encoding{pdfDocEncoding}%
12900 >>%
12901 /PUT pdfmark%
12902 [%
12903 /_objdef{aform}%
12904 /type/dict%
12905 /OBJ pdfmark%
12906 [%
12907 /_objdef{afields}%
12908 /type/array%
12909 /OBJ pdfmark%

```

12910 [%
12911   /_objdef{corder}%
12912   /type/array%
12913 /OBJ pdfmark%
12914 {%
12915   [%
12916     /BBox[0 0 100 100]%
12917     /_objdef{Check}%
12918   /BP pdfmark %
12919   1 0 0 setrgbcolor%
12920   /ZapfDingbats 80 selectfont %
12921   20 20 moveto%
12922   (4)show%
12923 [/EP pdfmark%
12924 [%
12925   /BBox[0 0 100 100]%
12926   /_objdef{Cross}%
12927 /BP pdfmark %
12928   1 0 0 setrgbcolor%
12929   /ZapfDingbats 80 selectfont %
12930   20 20 moveto%
12931   (8)show%
12932 [/EP pdfmark%
12933 [%
12934   /BBox[0 0 250 100]%
12935   /_objdef{Submit}%
12936 /BP pdfmark %
12937   0.6 setgray %
12938   0 0 250 100 rectfill %
12939   1 setgray %
12940   2 2 moveto %
12941   2 98 lineto %
12942   248 98 lineto %
12943   246 96 lineto %
12944   4 96 lineto %
12945   4 4 lineto %
12946   fill %
12947   0.34 setgray %
12948   248 98 moveto %
12949   248 2 lineto %
12950   2 2 lineto %
12951   4 4 lineto %
12952   246 4 lineto %
12953   246 96 lineto %
12954   fill%
12955   /Helvetica 76 selectfont %
12956   0 setgray %
12957   8 22.5 moveto%
12958   (Submit)show%
12959 [/EP pdfmark%

```

```

12960 [%
12961   /BBox[0 0 250 100]%
12962   /_objdef{SubmitP}%
12963   /BP pdfmark %
12964   0.6 setgray %
12965   0 0 250 100 rectfill %
12966   0.34 setgray %
12967   2 2 moveto %
12968   2 98 lineto %
12969   248 98 lineto %
12970   246 96 lineto %
12971   4 96 lineto %
12972   4 4 lineto %
12973   fill %
12974   1 setgray %
12975   248 98 moveto %
12976   248 2 lineto %
12977   2 2 lineto %
12978   4 4 lineto %
12979   246 4 lineto %
12980   246 96 lineto %
12981   fill%
12982   /Helvetica 76 selectfont %
12983   0 setgray %
12984   10 20.5 moveto%
12985   (Submit)show%
12986   [/EP pdfmark%
12987 } ?pdfmark%
12988 [%
12989   {aform}%
12990   <<%
12991   /Fields{afields}%
12992   /DR<<%
12993   /Font<<%
12994   /ZaDb{ZaDb}%
12995   /Helv{Helv}%
12996   >>%
12997   >>%
12998   /DA(/Helv 10 Tf 0 g)%
12999   /CO{corder}%
13000   \ifHy@pdfa
13001   \else
13002     \ifHyField@NeedAppearances
13003       /NeedAppearances true%
13004     \fi
13005     \fi
13006   >>%
13007 /PUT pdfmark%
13008 [%
13009   {Catalog}%

```

```

13010 <<%
13011 /AcroForm{aform}%
13012 >>%
13013 /PUT pdfmark%
13014 }}%
13015 \kvsetkeys{Form}{#1}%
13016 }
13017 \let\@endForm\ltx@empty
13018 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13019 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13020 }

13021 \newcount\HyField@AnnotCount
13022 \HyField@AnnotCount=\z@
13023 \def\HyField@AdvanceAnnotCount{%
13024 \global\advance\HyField@AnnotCount\@ne
13025 }
13026 \def\HyField@TheAnnotCount{%
13027 \the\HyField@AnnotCount
13028 }

13029 \edef\Fld@pageobjref{/P\string{ThisPage\string}}

13030 \def\HyField@AddToFields#1{%
13031 \pdfmark{%
13032 pdfmark=/APPEND,%
13033 Raw={%
13034 \string{afields\string}%
13035 \string{#1\HyField@TheAnnotCount\string}%
13036 }%
13037 }%
13038 \ifx\Fld@calculate@code\ltx@empty
13039 \else
13040 \pdfmark{%
13041 pdfmark=/APPEND,%
13042 Raw={%
13043 \string{corder\string}%
13044 \string{#1\HyField@TheAnnotCount\string}%
13045 }%
13046 }%
13047 \fi
13048 }

13049 \def\@TextField[#1]#2{% parameters, label
13050 \def\Fld@name{#2}%
13051 \let\Fld@default\ltx@empty
13052 \let\Fld@value\@empty
13053 \def\Fld@width{\DefaultWidthofText}%
13054 \def\Fld@height{%
13055 \ifFld@multiline
13056 \DefaultHeightofTextMultiline
13057 \else

```

```

13058     \DefaultHeightofText
13059     \fi
13060 }%
13061 \begingroup
13062 \expandafter\HyField@SetKeys\expandafter{%
13063     \DefaultOptionsofText,#1%
13064 }%
13065 \HyField@FlagsText
13066 \ifFld@hidden\def\Fld@width{1sp}\fi
13067 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13068 \HyField@AdvanceAnnotCount
13069 \LayoutTextField{#2}{%
13070     \leavevmode
13071     \Hy@escapeform\PDFForm@Text
13072     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13073         pdfmark=/ANN,%
13074         objdef=text\HyField@TheAnnotCount,%
13075         Raw={\PDFForm@Text}%
13076     }%
13077 }%
13078 \HyField@AddToFields{text}%
13079 \endgroup
13080 }
13081 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13082     \def\Fld@name{#2}%
13083     \let\Fld@default\relax
13084     \let\Fld@value\relax
13085     \def\Fld@width{\DefaultWidthofChoiceMenu}%
13086     \def\Fld@height{\DefaultHeightofChoiceMenu}%
13087     \begingroup
13088     \Fld@menulength=0 %
13089     \@tempdima\z@
13090     \@for\@curropt:=#3\do{%
13091         \expandafter\Fld@checkequals\@curropt==\%
13092         \Hy@StepCount\Fld@menulength
13093         \settowidth{\@tempdimb}{\@currDisplay}%
13094         \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13095     }%
13096     \advance\@tempdima by 15\p@
13097     \begingroup
13098     \HyField@SetKeys{#1}%
13099     \edef\x{\endgroup
13100         \noexpand\expandafter
13101         \noexpand\HyField@SetKeys
13102         \noexpand\expandafter{%
13103             \expandafter\noexpand\curname DefaultOptionsof%
13104             \ifFld@radio
13105                 Radio%
13106             \else
13107                 \ifFld@combo

```

```

13108         \ifFld@popdown
13109             PopdownBox%
13110         \else
13111             ComboBox%
13112         \fi
13113     \else
13114         ListBox%
13115     \fi
13116 \fi
13117 \endcsname
13118 }%
13119 }\x
13120 \HyField@SetKeys{#1}%
13121 \ifFld@hidden\def\Fld@width{1sp}\fi
13122 \ifx\Fld@value\relax
13123     \let\Fld@value\Fld@default
13124 \fi
13125 \LayoutChoiceField{#2}{%
13126     \ifFld@radio
13127         \HyField@FlagsRadioButton
13128         \@@Radio{#3}%
13129     \else
13130         \begingroup
13131         \HyField@FlagsChoice
13132         \ifdim\Fld@width<\@tempdima
13133             \ifdim\@tempdima<1cm\@tempdima1cm\fi
13134             \edef\Fld@width{\the\@tempdima}%
13135         \fi
13136         \ifFld@combo
13137         \else
13138             \@tempdima=\the\Fld@menulength\Fld@charsize
13139             \advance\@tempdima by \Fld@borderwidth bp %
13140             \advance\@tempdima by \Fld@borderwidth bp %
13141             \edef\Fld@height{\the\@tempdima}%
13142         \fi
13143         \@@Listbox{#3}%
13144     \endgroup
13145 \fi
13146 }%
13147 \endgroup
13148 }
13149 \def\@@Radio#1{%
13150     \Fld@listcount=0 %
13151     \EdefEscapeName\Fld@default{\Fld@default}%
13152     \@for\@curropt:=#1\do{%
13153         \expandafter\Fld@checkequals\@curropt==\\%
13154         \EdefEscapeName\@currValue{\@currValue}%
13155         \Hy@StepCount\Fld@listcount
13156         \@currDisplay\space
13157         \Hy@escapeform\PDFForm@Radio

```



```

13158 \ifnum\Fld@listcount=1 %
13159 \HyField@AdvanceAnnotCount
13160 \fi
13161 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13162 pdfmark=/ANN,%
13163 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13164 Raw={%
13165 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13166 }%
13167 } % deliberate space between radio buttons
13168 \ifnum\Fld@listcount=1 %
13169 \HyField@AddToFields{radio}%
13170 \fi
13171 }%
13172 }
13173 \newcount\Fld@listcount
13174 \def\@@ListBox#1{%
13175 \HyField@PDFChoices{#1}%
13176 \Hy@escapeform\PDFForm@List
13177 \HyField@AdvanceAnnotCount
13178 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13179 pdfmark=/ANN,%
13180 objdef=list\HyField@TheAnnotCount,%
13181 Raw={\PDFForm@List}%
13182 }%
13183 \HyField@AddToFields{list}%
13184 }
13185 \def\@PushButton[#1]#2{% parameters, label
13186 \def\Fld@name{#2}%
13187 \begingroup
13188 \expandafter\HyField@SetKeys\expandafter{%
13189 \DefaultOptionsofPushButton,#1%
13190 }%
13191 \ifHy@pdfa
13192 \Hy@Error{%
13193 PDF/A: Push button with JavaScript is prohibited%
13194 }\@ehc
13195 \LayoutPushButtonField{%
13196 \leavevmode
13197 \MakeButtonField{#2}%
13198 }%
13199 \else
13200 \HyField@FlagsPushButton
13201 \ifFld@hidden\def\Fld@width{1sp}\fi
13202 \HyField@AdvanceAnnotCount
13203 \LayoutPushButtonField{%
13204 \leavevmode
13205 \Hy@escapeform\PDFForm@Push
13206 \pdfmark[\MakeButtonField{#2}]{%
13207 pdfmark=/ANN,%

```

```

13208         objdef=push\HyField@TheAnnotCount,%
13209         Raw={\PDFForm@Push}%
13210     }%
13211 }%
13212     \HyField@AddToFields{push}%
13213 \fi
13214 \endgroup
13215 }
13216 \def\@Submit[#1]#2{%
13217     \def\Fld@width{\DefaultWidthofSubmit}%
13218     \def\Fld@height{\DefaultHeightofSubmit}%
13219     \begingroup
13220     \expandafter\HyField@SetKeys\expandafter{%
13221         \DefaultOptionsofSubmit,#1%
13222     }%
13223     \HyField@FlagsPushButton
13224     \HyField@FlagsSubmit
13225     \ifFld@hidden\def\Fld@width{1sp}\fi
13226     \Hy@escapeform\PDFForm@Submit
13227     \HyField@AdvanceAnnotCount
13228     \pdfmark[\MakeButtonField{#2}]{%
13229         pdfmark=/ANN,%
13230         objdef=submit\HyField@TheAnnotCount,%
13231         Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13232     }%
13233     \HyField@AddToFields{submit}%
13234 \endgroup
13235 }
13236 \def\@Reset[#1]#2{%
13237     \def\Fld@width{\DefaultWidthofReset}%
13238     \def\Fld@height{\DefaultHeightofReset}%
13239     \begingroup
13240     \expandafter\HyField@SetKeys\expandafter{%
13241         \DefaultOptionsofReset,#1%
13242     }%
13243     \leavevmode
13244     \ifHy@pdfa
13245         \Hy@Error{%
13246             PDF/A: Reset action is prohibited%
13247         }\@ehc
13248         \MakeButtonField{#2}%
13249     \else
13250         \HyField@FlagsPushButton
13251         \ifFld@hidden\def\Fld@width{1sp}\fi
13252         \Hy@escapeform\PDFForm@Reset
13253         \HyField@AdvanceAnnotCount
13254         \pdfmark[\MakeButtonField{#2}]{%
13255             pdfmark=/ANN,%
13256             objdef=reset\HyField@TheAnnotCount,%
13257             Raw={\PDFForm@Reset}%

```

```

13258     }%
13259     \HyField@AddToFields{reset}%
13260     \fi
13261   \endgroup
13262 }%
13263 \def\@CheckBox[#1]#2{% parameters, label
13264   \def\Fld@name{#2}%
13265   \def\Fld@default{0}%
13266   \begingroup
13267     \def\Fld@width{\DefaultWidthofCheckBox}%
13268     \def\Fld@height{\DefaultHeightofCheckBox}%
13269     \expandafter\HyField@SetKeys\expandafter{%
13270       \DefaultOptionsofCheckBox,#1%
13271     }%
13272     \HyField@FlagsCheckBox
13273     \ifFld@hidden\def\Fld@width{1sp}\fi
13274     \HyField@AdvanceAnnotCount
13275     \LayoutCheckField{#2}{%
13276       \leavevmode
13277       \Hy@escapeform\PDFForm@Check
13278       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13279         pdfmark=/ANN,%
13280         objdef=check\HyField@TheAnnotCount,%
13281         Raw={\PDFForm@Check}%
13282       }%
13283     }%
13284     \HyField@AddToFields{check}%
13285   \endgroup
13286 }
13287 \</pdfmark>

```

48.2 HyperTeX

```

13288 <*hypertext>
13289 \def\@Form[#1]{%
13290   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13291 }
13292 \let\@endForm\ltx@empty
13293 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13294   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13295 }
13296 \def\@TextField[#1]#2{% parameters, label
13297   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13298 }
13299 \def\@CheckBox[#1]#2{% parameters, label
13300   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13301 }
13302 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13303   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13304 }

```

```

13305 \def\@PushButton[#1]#2{% parameters, label
13306 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13307 }
13308 \def\@Reset[#1]#2{%
13309 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13310 }
13311 \def\@Submit[#1]#2{%
13312 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13313 }
13314 \</hypertex>

```

48.3 TeX4ht

```

13315 \<*tex4ht>
13316 \def\@Form[#1]{%
13317 \kvsetkeys{Form}{#1}%
13318 \HCode{<form action="\Form@action" method="\Form@method">}%
13319 }
13320 \def\@endForm{\HCode{</form>}}
13321 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13322 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13323 }
13324 \def\@TextField[#1]#2{% parameters, label
13325 \let\Hy@reserved@a\@empty
13326 \def\Fld@name{#2}%
13327 \let\Fld@default\ltx@empty
13328 \bgroup
13329 \Field@toks={ }%
13330 \kvsetkeys{Field}{#1}%
13331 \HCode{<label for="\Fld@name">#2</label>}%
13332 \ifFld@password
13333 \@@PasswordField
13334 \else
13335 \@@TextField
13336 \fi
13337 \egroup
13338 }
13339 \def\@@PasswordField{%
13340 \HCode{%
13341 <input type="password" %
13342 id="\Fld@name" %
13343 name="\Fld@name" %
13344 \ifFld@hidden type="hidden" \fi
13345 value="\Fld@default" %
13346 \the\Field@toks
13347 >%
13348 }%
13349 }
13350 \def\@@TextField{%
13351 \ifFld@multiline

```

```

13352 \HCode{<textarea %
13353 \ifFld@readonly readonly \fi
13354 id="\Fld@name" %
13355 name="\Fld@name" %
13356 \ifFld@hidden type="hidden" \fi
13357 \the\Field@toks>%
13358 }%
13359 \Fld@default
13360 \HCode{</textarea>}%
13361 \else
13362 \HCode{<input type="textbox" %
13363 \ifFld@readonly readonly \fi
13364 id="\Fld@name" %
13365 name="\Fld@name" %
13366 \ifFld@hidden type="hidden" \fi
13367 value="\Fld@default" %
13368 \the\Field@toks>%
13369 }%
13370 \fi
13371 }
13372 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13373 \def\Fld@name{#2}%
13374 \let\Fld@default\ltx@empty
13375 \let\Hy@reserved@a\relax
13376 \begingroup
13377 \expandafter\Fld@findlength#3\\%
13378 \Field@toks={ }%
13379 \kvsetkeys{Field}{#1}%
13380 #2%
13381 \ifFld@radio
13382 \expandafter\@@Radio#3\\%
13383 \else
13384 \expandafter\@@Menu#3\\%
13385 \fi
13386 \endgroup
13387 }
13388 \def\Fld@findlength#1\\{%
13389 \Fld@menulength=0 %
13390 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13391 }
13392 \def\@@Menu#1\\{%
13393 \HCode{<select size="\the\Fld@menulength" %
13394 name="\Fld@name" %
13395 \the\Field@toks>%
13396 }%
13397 \@for\@curropt:=#1\do{%
13398 \expandafter\Fld@checkequals\@curropt==\\%
13399 \HCode{<option %
13400 \ifx\@curropt\Fld@default selected \fi
13401 value="\@currValue">\@currDisplay</option>%

```

```

13402 }%
13403 }%
13404 \HCode{</select>}%
13405 }
13406 \def\@@Radio#1\{\{%
13407 \@for\@curropt:=#1\do{%
13408 \expandafter\Fld@checkequals\@curropt==\{%
13409 \HCode{<input type="radio" %
13410 \ifx\@curropt\Fld@default checked \fi
13411 name="\Fld@name" %
13412 value="\@currValue" %
13413 \the\Field@toks>%
13414 }%
13415 \@currDisplay
13416 }%
13417 }
13418 \def\@PushButton[#1]#2{% parameters, label
13419 \def\Fld@name{#2}%
13420 \bgroup
13421 \Field@toks={}%
13422 \kvsetkeys{Field}{#1}%
13423 \HCode{<input type="button" %
13424 name="\Fld@name" %
13425 value="#2" %
13426 \the\Field@toks>%
13427 }%
13428 \HCode{</button>}%
13429 \egroup
13430 }
13431 \def\@Submit[#1]#2{%
13432 \HCode{<button type="submit">#2</button>}%
13433 }
13434 \def\@Reset[#1]#2{%
13435 \HCode{<button type="reset">#2</button>}%
13436 }
13437 \def\@CheckBox[#1]#2{% parameters, label
13438 \let\Hy@reserved@a\@empty
13439 \def\Fld@name{#2}%
13440 \def\Fld@default{0}%
13441 \bgroup
13442 \Field@toks={}%
13443 \kvsetkeys{Field}{#1}%
13444 \HCode{<input type="checkbox" %
13445 \ifFld@checked checked \fi
13446 \ifFld@disabled disabled \fi
13447 \ifFld@readonly readonly \fi
13448 name="\Fld@name" %
13449 \ifFld@hidden type="hidden" \fi
13450 value="\Fld@default" %
13451 \the\Field@toks>%

```

```

13452     #2%
13453   }%
13454 \egroup
13455 }
13456 </tex4ht>

```

48.4 pdfTeX

```

13457 <*pdfTeX>
13458 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13459 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13460 }
13461 \def\MakeFieldObject#1#2{\sbox0{#1}%
13462 \immediate\pdfxform0 %
13463 \expandafter\edef\csname #2Object\endcsname{%
13464 \the\pdfastxform\space 0 R}%
13465 }%
13466 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13467 }%
13468 \let\HyField@afields\ltx@empty
13469 \let\HyField@cofields\ltx@empty
13470 \begingroup\expandafter\expandafter\expandafter\endgroup
13471 \expandafter\ifx\csname pdfastlink\endcsname\relax
13472 \let\HyField@AddToFields\relax
13473 \PackageInfo{hyperref}{%
13474 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13475 \MessageBreak
13476 Adobe Reader/Acrobat accepts an empty /Field array,%
13477 \MessageBreak
13478 but other PDF viewers might complain%
13479 }%
13480 \else
13481 \let\HyField@AuxAddToFields\ltx@gobble
13482 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13483 \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.

```

13484 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13485 \begingroup
13486 \Hy@safe@activetrue
13487 \let\ltx@secondoftwo\relax
13488 \ifx\HyField@cofields\ltx@empty
13489 \xdef\HyField@cofields{%
13490 \ltx@secondoftwo{#1}{ #2 0 R}%
13491 }%
13492 \else
13493 \let\ltx@secondoftwo\relax
13494 \def\HyField@AddCoField###1##2##3{%
13495 \ifx###1\ltx@empty
13496 \ltx@secondoftwo{#1}{ #2 0 R}%

```

```

13497         \expandafter\ltx@gobble
13498     \else
13499         \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13500             \ltx@secondoftwo{#1}{ #2 0 R}%
13501             \ltx@secondoftwo{##2}{##3}%
13502             \expandafter\expandafter\expandafter\ltx@gobble
13503         \else
13504             \ltx@secondoftwo{##2}{##3}%
13505         \fi
13506     \fi
13507     \HyField@AddCoField
13508 }%
13509 \xdef\HyField@cofields{%
13510     \expandafter\HyField@AddCoField
13511     \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13512 }%
13513 \fi
13514 \endgroup
13515 }%
13516 \Hy@AtBeginDocument{%
13517     \if@files
13518         \immediate\write\@mainaux{%
13519             \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13520         }%
13521         \immediate\write\@mainaux{%
13522             \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13523         }%
13524     \fi
13525     \let\HyField@AfterAuxOpen\@firstofone
13526     \def\HyField@AuxAddToFields#1{%
13527         \xdef\HyField@afields{%
13528             \ifx\HyField@afields\@empty
13529             \else
13530                 \HyField@afields
13531                 \space
13532             \fi
13533             #1 0 R%
13534         }%
13535     }%
13536     \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13537 }%
13538 \def\HyField@AddToFields{%
13539     \expandafter\HyField@@AddToFields\expandafter{%
13540         \the\pdfastlink
13541     }%
13542     \ifx\Fld@calculate@code\ltx@empty
13543     \else
13544         \begingroup
13545         \Hy@safe@activetrue
13546         \edef\Hy@temp{%

```



```

13547     \endgroup
13548     \if@filesw
13549         \write\@mainaux{%
13550             \string\HyField@AuxAddToCoFields{%
13551                 \Fld@calculate@sortkey
13552             }{%
13553                 \the\pdfastlink
13554             }%
13555         }%
13556     \fi
13557 }%
13558 \Hy@temp
13559 \fi
13560 }%
13561 \def\HyField@@AddToFields#1{%
13562     \HyField@AfterAuxOpen{%
13563         \if@filesw
13564             \write\@mainaux{%
13565                 \string\HyField@AuxAddToFields{#1}%
13566             }%
13567         \fi
13568     }%
13569 }%
13570 \fi
13571 \def\@Form[#1]{%
13572     \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13573     \kvsetkeys{Form}{#1}%
13574     \pdf@ifdraftmode{}{%
13575         \Hy@FormObjects
13576         \ifnum\pdftexversion>13 %
13577             \pdfrefobj\OBJ@pdfdocencoding
13578             \pdfrefobj\OBJ@ZaDb
13579             \pdfrefobj\OBJ@Helv
13580         \fi
13581         \AtVeryEndDocument{%
13582             \immediate\pdfobj{%
13583                 <<%
13584                 /Fields[\HyField@afields]%
13585                 \ifx\HyField@cofields\ltx@empty
13586                 \else
13587                 /CO[\romannumeral-`Q\HyField@cofields]%
13588                 \fi
13589                 /DR<<%
13590                 /Font<<%
13591                 /ZaDb \OBJ@ZaDb\space 0 R%
13592                 /Helv \OBJ@Helv\space 0 R%
13593                 >>%
13594                 >>%
13595                 /DA[/Helv 10 Tf 0 g]%
13596                 \ifHy@pdfa

```

```

13597     \else
13598         \ifHyField@NeedAppearances
13599             /NeedAppearances true%
13600     \fi
13601     \fi
13602     >>%
13603 }%
13604 \edef\OBJ@acroform{\the\pdfastobj}%
13605 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13606 }%
13607 }%
13608 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13609 \begingroup
13610     \fontfamily{pzd}%
13611     \fontencoding{U}%
13612     \fontseries{m}%
13613     \fontshape{n}%
13614     \selectfont
13615     \char123 %
13616 \endgroup
13617 }{Ding}%
13618 \MakeFieldObject{%
13619     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13620 }{Submit}%
13621 \MakeFieldObject{%
13622     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13623 }{SubmitP}%
13624 }
13625 \let\@endForm\ltx@empty
13626 \let\HyAnn@AbsPageLabel\ltx@empty
13627 \let\Fld@pageobjref\ltx@empty
13628 \ltx@ifundefined{pdfpageref}{%
13629 }{%
13630 \ltx@ifpackageloaded{zref-abspage}{%
13631     \newcount\HyAnn@Count
13632     \HyAnn@Count=\ltx@zero
13633     \def\HyAnn@AbsPageLabel{%
13634         \global\advance\HyAnn@Count by\ltx@one
13635         \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13636         \zref@refused{HyAnn@\the\HyAnn@Count}%
13637     }%
13638     \def\Fld@pageobjref{%
13639         \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13640             }{%
13641                 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13642                     /P \pdfpageref
13643                     \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13644                     \space 0 R%

```

```

13645     }{%
13646     }%
13647     }%
13648     }%
13649 }{%
13650 }%
13651 }

13652 \def\@TextField[#1]#2{% parameters, label
13653 \def\Fld@name{#2}%
13654 \let\Fld@default\ltx@empty
13655 \let\Fld@value\@empty
13656 \def\Fld@width{\DefaultWidthofText}%
13657 \def\Fld@height{%
13658 \ifFld@multiline
13659 \DefaultHeightofTextMultiline
13660 \else
13661 \DefaultHeightofText
13662 \fi
13663 }%
13664 \begingroup
13665 \expandafter\HyField@SetKeys\expandafter{%
13666 \DefaultOptionsofText,#1%
13667 }%
13668 \PDFForm@Name
13669 \HyField@FlagsText
13670 \ifFld@hidden\def\Fld@width{1sp}\fi
13671 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13672 \LayoutTextField{#2}{%
13673 \leavevmode
13674 \HyAnn@AbsPageLabel
13675 \Hy@escapeform\PDFForm@Text
13676 \pdfstartlink user {\PDFForm@Text}\relax
13677 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13678 \HyField@AddToFields
13679 }%
13680 \endgroup
13681 }

13682 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13683 \def\Fld@name{#2}%
13684 \let\Fld@default\relax
13685 \let\Fld@value\relax
13686 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13687 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13688 \begingroup
13689 \Fld@menulength=0 %
13690 \@tempdima\z@
13691 \@for\@curropt:=#3\do{%
13692 \expandafter\Fld@checkequals\@curropt==\%
13693 \Hy@StepCount\Fld@menulength

```

```

13694 \settowidth{\@tempdimb}{\@currDisplay}%
13695 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13696 }%
13697 \advance\@tempdima by 15\p@
13698 \begingroup
13699 \HyField@SetKeys{#1}%
13700 \edef\x{\endgroup
13701 \noexpand\expandafter
13702 \noexpand\HyField@SetKeys
13703 \noexpand\expandafter{%
13704 \expandafter\noexpand\csname DefaultOptionsof%
13705 \ifFld@radio
13706 Radio%
13707 \else
13708 \ifFld@combo
13709 \ifFld@popdown
13710 PopdownBox%
13711 \else
13712 ComboBox%
13713 \fi
13714 \else
13715 ListBox%
13716 \fi
13717 \fi
13718 \endcsname
13719 }%
13720 }\x
13721 \HyField@SetKeys{#1}%
13722 \PDFForm@Name
13723 \ifFld@hidden\def\Fld@width{1sp}\fi
13724 \ifx\Fld@value\relax
13725 \let\Fld@value\Fld@default
13726 \fi
13727 \LayoutChoiceField{#2}{%
13728 \ifFld@radio
13729 \HyField@FlagsRadioButton
13730 \@@Radio{#3}%
13731 \else
13732 \begingroup
13733 \HyField@FlagsChoice
13734 \ifdim\Fld@width<\@tempdima
13735 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13736 \edef\Fld@width{\the\@tempdima}%
13737 \fi
13738 \ifFld@combo
13739 \else
13740 \@tempdima=\the\Fld@menulength\Fld@charsize
13741 \advance\@tempdima by \Fld@borderwidth bp %
13742 \advance\@tempdima by \Fld@borderwidth bp %
13743 \edef\Fld@height{\the\@tempdima}%

```

```

13744      \fi
13745      \@@ListBox{#3}%
13746      \endgroup
13747      \fi
13748      }%
13749      \endgroup
13750      }
13751      \def\@@Radio#1{%
13752      \Fld@listcount=0 %
13753      \EdefEscapeName\Fld@default{\Fld@default}%
13754      \@for\@curropt:=#1\do{%
13755      \expandafter\Fld@checkequals\@curropt==\%
13756      \EdefEscapeName\@currValue{\@currValue}%
13757      \Hy@StepCount\Fld@listcount
13758      \@currDisplay\space
13759      \leavevmode
13760      \HyAnn@AbsPageLabel
13761      \Hy@escapeform\PDFForm@Radio
13762      \pdfstartlink user {%
13763      \PDFForm@Radio
13764      /AP<<%
13765      /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.

```

13766      /\@currValue\space \DingObject
13767      >>%
13768      >>%
13769      }%
13770      \relax
13771      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13772      \ifnum\Fld@listcount=1 %
13773      \HyField@AddToFields
13774      \fi
13775      \space % deliberate space between radio buttons
13776      }%
13777      }
13778      \newcount\Fld@listcount
13779      \def\@@ListBox#1{%
13780      \HyField@PDFChoices{#1}%
13781      \leavevmode
13782      \HyAnn@AbsPageLabel
13783      \Hy@escapeform\PDFForm@List
13784      \pdfstartlink user {\PDFForm@List}\relax
13785      \MakeChoiceField{\Fld@width}{\Fld@height}%
13786      \pdfendlink
13787      \HyField@AddToFields
13788      }
13789      \def\@PushButton[#1]#2{% parameters, label

```

```

13790 \def\Fld@name{#2}%
13791 \begingroup
13792 \expandafter\HyField@SetKeys\expandafter{%
13793   \DefaultOptionsofPushButton,#1%
13794 }%
13795 \PDFForm@Name
13796 \ifHy@pdfa
13797   \Hy@Error{%
13798     PDF/A: Push button with JavaScript is prohibited%
13799   }\@ehc
13800   \LayoutPushButtonField{%
13801     \leavevmode
13802     \MakeButtonField{#2}%
13803   }%
13804 \else
13805   \HyField@FlagsPushButton
13806   \ifFld@hidden\def\Fld@width{1sp}\fi
13807   \LayoutPushButtonField{%
13808     \leavevmode
13809     \HyAnn@AbsPageLabel
13810     \Hy@escapeform\PDFForm@Push
13811     \pdfstartlink user {\PDFForm@Push}\relax
13812     \MakeButtonField{#2}%
13813     \pdfendlink
13814     \HyField@AddToFields
13815   }%
13816 \fi
13817 \endgroup
13818 }
13819 \def\@Submit[#1]#2{%
13820   \def\Fld@width{\DefaultWidthofSubmit}%
13821   \def\Fld@height{\DefaultHeightofSubmit}%
13822   \begingroup
13823   \expandafter\HyField@SetKeys\expandafter{%
13824     \DefaultOptionsofSubmit,#1%
13825   }%
13826   \HyField@FlagsPushButton
13827   \HyField@FlagsSubmit
13828   \ifFld@hidden\def\Fld@width{1sp}\fi
13829   \leavevmode
13830   \HyAnn@AbsPageLabel
13831   \Hy@escapeform\PDFForm@Submit
13832   \pdfstartlink user {%
13833     \PDFForm@Submit
13834     /AP<</N \SubmitObject/D \SubmitPObject>>%
13835   }%
13836   \relax
13837   \MakeButtonField{#2}%
13838   \pdfendlink
13839   \HyField@AddToFields

```

```

13840 \endgroup
13841 }
13842 \def\@Reset[#1]#2{%
13843   \def\Fld@width{\DefaultWidthofReset}%
13844   \def\Fld@height{\DefaultHeightofReset}%
13845   \begingroup
13846     \expandafter\HyField@SetKeys\expandafter{%
13847       \DefaultOptionsofReset,#1%
13848     }%
13849     \leavevmode
13850     \ifHy@pdfa
13851       \Hy@Error{%
13852         PDF/A: Reset action is prohibited%
13853       } \@ehc
13854       \MakeButtonField{#2}%
13855     \else
13856       \HyField@FlagsPushButton
13857       \ifFld@hidden\def\Fld@width{1sp}\fi
13858       \HyAnn@AbsPageLabel
13859       \Hy@escapeform\PDFForm@Reset
13860       \pdfstartlink user {\PDFForm@Reset}\relax
13861       \MakeButtonField{#2}%
13862       \pdfendlink
13863       \HyField@AddToFields
13864     \fi
13865   \endgroup
13866 }
13867 \def\@CheckBox[#1]#2{% parameters, label
13868   \def\Fld@name{#2}%
13869   \def\Fld@default{0}%
13870   \begingroup
13871     \def\Fld@width{\DefaultWidthofCheckBox}%
13872     \def\Fld@height{\DefaultHeightofCheckBox}%
13873     \expandafter\HyField@SetKeys\expandafter{%
13874       \DefaultOptionsofCheckBox,#1%
13875     }%
13876     \PDFForm@Name
13877     \HyField@FlagsCheckBox
13878     \ifFld@hidden\def\Fld@width{1sp}\fi
13879     \LayoutCheckField{#2}{%
13880       \leavevmode
13881       \HyAnn@AbsPageLabel
13882       \Hy@escapeform\PDFForm@Check
13883       \pdfstartlink user {\PDFForm@Check}\relax
13884       \MakeCheckField{\Fld@width}{\Fld@height}%
13885       \pdfendlink
13886       \HyField@AddToFields
13887     }%
13888   \endgroup
13889 }

```

```

13890 \def\Hy@FormObjects{%
13891   \pdfobj {%
13892     <<%
13893       /Type/Encoding%
13894       /Differences[
13895         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13896         /ring/tilde %
13897         39/quotesingle %
13898         96/grave %
13899         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13900         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13901         /quotedblbase/quotedblleft/quotedblright/quoteleft%
13902         /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13903         /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13904         160/Euro %
13905         164/currency %
13906         166/brokenbar %
13907         168/dieresis/copyright/ordfeminine %
13908         172/logicalnot/.notdef/registered/macron/degree/plusminus%
13909         /twosuperior/threesuperior/acute/mu %
13910         183/periodcentered/cedilla/onesuperior/ordmasculine %
13911         188/onequarter/onehalf/threequarters %
13912         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13913         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13914         /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13915         /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13916         /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13917         /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13918         /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13919         /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13920         /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13921         /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13922       ]%
13923     >>%
13924   }%
13925   \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13926   \pdfobj{%
13927     <<%
13928       /Type/Font%
13929       /Subtype/Type1%
13930       /Name/ZaDb%
13931       /BaseFont/ZapfDingbats%
13932     >>%
13933   }%
13934   \xdef\OBJ@ZaDb{\the\pdfastobj}%
13935   \pdfobj{%
13936     <<%
13937       /Type/Font%
13938       /Subtype/Type1%
13939       /Name/Helv%

```



```

13940 /BaseFont/Helvetica%
13941 /Encoding \OBJ@pdfdocencoding\space 0 R%
13942 >>%
13943 }%
13944 \xdef\OBJ@Helv{\the\pdfastobj}%
13945 \global\let\Hy@FormObjects\relax
13946 }
13947 \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.

```

13948 \*dvipdfm | xetex

```

\@Gauge

```

13949 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13950 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13951 }

```

\@Form

```

13952 \def\@Form[#1]{%
13953 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13954 \kvsetkeys{Form}{#1}%
13955 \Hy@FormObjects
13956 \@pdfm@mark{obj @afields []}%
13957 \@pdfm@mark{obj @corder []}%
13958 \@pdfm@mark{%
13959 obj @aform <<%
13960 /Fields @afields%
13961 /DR<<%
13962 /Font<<%
13963 /ZaDb @OBJZaDb%
13964 /Helv @OBJHelv%
13965 >>%
13966 >>%
13967 /DA(/Helv 10 Tf 0 g)%
13968 /CO @corder%
13969 \ifHy@pdfa
13970 \else
13971 \ifHyField@NeedAppearances
13972 /NeedAppearances true%
13973 \fi
13974 \fi
13975 >>%
13976 }%
13977 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13978 }

```

\@endForm

```
13979 \let\@endForm\ltx@empty
```

```
\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
```

```
13980 \def\dvipdfm@setdim{%  
13981   height \the\ht\pdfm@box\space  
13982   width  \the\wd\pdfm@box\space  
13983   depth  \the\dp\pdfm@box\space  
13984 }
```

```
\HyField@AnnotCount
```

```
13985 \newcount\HyField@AnnotCount  
13986 \HyField@AnnotCount=\z@
```

```
\HyField@AdvanceAnnotCount
```

```
13987 \def\HyField@AdvanceAnnotCount{%  
13988   \global\advance\HyField@AnnotCount\@ne  
13989 }
```

```
\HyField@TheAnnotCount
```

```
13990 \def\HyField@TheAnnotCount{%  
13991   \the\HyField@AnnotCount  
13992 }
```

```
\Fld@pageobjref
```

```
13993 \def\Fld@pageobjref{/P @thispage}%
```

```
\HyField@AddToFields
```

```
13994 \def\HyField@AddToFields#1{%  
13995   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%  
13996   \ifx\Fld@calculate@code\ltx@empty  
13997   \else  
13998     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%  
13999   \fi  
14000 }
```

```
\@TextField
```

```
14001 \def\@TextField[#1]#2{% parameters, label  
14002   \def\Fld@name{#2}%  
14003   \let\Fld@default\ltx@empty  
14004   \let\Fld@value\@empty  
14005   \def\Fld@width{\DefaultWidthofText}%  
14006   \def\Fld@height{%  
14007     \ifFld@multiline  
14008       \DefaultHeightofTextMultiline  
14009     \else  
14010       \DefaultHeightofText  
14011     \fi  
14012   }%  
14013   \begingroup
```

```

14014 \expandafter\HyField@SetKeys\expandafter{%
14015   \DefaultOptionsofText,#1%
14016 }%
14017 \PDFForm@Name
14018 \HyField@FlagsText
14019 \ifFld@hidden\def\Fld@width{1sp}\fi
14020 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
14021 \setbox\pdfm@box=\hbox{%
14022   \MakeTextField{\Fld@width}{\Fld@height}%
14023 }%
14024 \HyField@AdvanceAnnotCount
14025 \LayoutTextField{#2}{%
14026   \leavevmode
14027   \Hy@escapeform\PDFForm@Text
14028   \@pdfm@mark{%
14029     ann @text\HyField@TheAnnotCount\space
14030     \dvipdfm@setdim << \PDFForm@Text >>%
14031   }%
14032 }%
14033 \unhbox\pdfm@box
14034 \HyField@AddToFields{text}%
14035 % record in @afields array
14036 \endgroup
14037 }

```

\@ChoiceMenu

```

14038 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14039   \def\Fld@name{#2}%
14040   \let\Fld@default\relax
14041   \let\Fld@value\relax
14042   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14043   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14044   \begingroup
14045     \Fld@menulength=0 %
14046     \@tempdima\z@
14047     \@for\@curropt:=#3\do{%
14048       \expandafter\Fld@checkequals\@curropt==\\%
14049       \Hy@StepCount\Fld@menulength
14050       \settowidth{\@tempdimb}{\@currDisplay}%
14051       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14052     }%
14053     \advance\@tempdima by 15\p@
14054     \begingroup
14055       \HyField@SetKeys{#1}%
14056     \edef\x{\endgroup
14057       \noexpand\expandafter
14058       \noexpand\HyField@SetKeys
14059       \noexpand\expandafter{%
14060         \expandafter\noexpand\curname DefaultOptionsof%
14061         \ifFld@radio

```

```

14062         Radio%
14063     \else
14064         \ifFld@combo
14065         \ifFld@popdown
14066             PopdownBox%
14067         \else
14068             ComboBox%
14069         \fi
14070     \else
14071         ListBox%
14072     \fi
14073 \fi
14074 \endcsname
14075 }%
14076 }\x
14077 \HyField@SetKeys{#1}%
14078 \PDFForm@Name
14079 \ifFld@hidden\def\Fld@width{1sp}\fi
14080 \ifx\Fld@value\relax
14081     \let\Fld@value\Fld@default
14082 \fi
14083 \LayoutChoiceField{#2}{%
14084     \ifFld@radio
14085         \HyField@FlagsRadioButton
14086         \@@Radio{#3}%
14087     \else
14088         \begingroup
14089         \HyField@FlagsChoice
14090         \ifdim\Fld@width<\@tempdima
14091             \ifdim\@tempdima<1cm\@tempdima1cm\fi
14092             \edef\Fld@width{\the\@tempdima}%
14093         \fi
14094         \ifFld@combo
14095         \else
14096             \@tempdima=\the\Fld@menulength\Fld@charsize
14097             \advance\@tempdima by \Fld@borderwidth bp %
14098             \advance\@tempdima by \Fld@borderwidth bp %
14099             \edef\Fld@height{\the\@tempdima}%
14100         \fi
14101         \@@ListBox{#3}%
14102     \endgroup
14103 \fi
14104 }%
14105 \endgroup
14106 }

```

\@@Radio

```

14107 \def\@@Radio#1{%
14108     \Fld@listcount=0 %
14109     \EdefEscapeName\Fld@default{\Fld@default}%

```

```

14110 \setbox\pdfm@box=\hbox{%
14111 \MakeRadioField{\Fld@width}{\Fld@height}%
14112 }%
14113 \@for\@curropt:=#1\do{%
14114 \expandafter\Fld@checkequals\@curropt==\\%
14115 \EdefEscapeName\@currValue{\@currValue}%
14116 \Hy@StepCount\Fld@listcount
14117 \@currDisplay\space
14118 \leavevmode
14119 \Hy@escapeform\PDFForm@Radio
14120 \ifnum\Fld@listcount=1 %
14121 \HyField@AdvanceAnnotCount
14122 \fi
14123 \@pdfm@mark{%
14124 ann %
14125 \ifnum\Fld@listcount=1 %
14126 @radio\HyField@TheAnnotCount%
14127 \space
14128 \fi
14129 \dvi pdfm@setdim
14130 <<%
14131 \PDFForm@Radio
14132 /AP<</N<</\@currValue /null>>>>%
14133 >>%
14134 }%
14135 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14136 \ifnum\Fld@listcount=1 %
14137 \HyField@AddToFields{radio}%
14138 \fi
14139 }%
14140 }

```

\Fld@listcount

```

14141 \newcount\Fld@listcount

```

\@@Listbox

```

14142 \def\@@Listbox#1{%
14143 \HyField@PDFChoices{#1}%
14144 \setbox\pdfm@box=\hbox{%
14145 \MakeChoiceField{\Fld@width}{\Fld@height}%
14146 }%
14147 \leavevmode
14148 \Hy@escapeform\PDFForm@List
14149 \HyField@AdvanceAnnotCount
14150 \@pdfm@mark{%
14151 ann @list\HyField@TheAnnotCount\space
14152 \dvi pdfm@setdim
14153 <<\PDFForm@List>>%
14154 }%
14155 \unhbox\pdfm@box

```

```

14156 \HyField@AddToFields{list}%
14157 }

\@PushButton
14158 \def\@PushButton[#1]#2{% parameters, label
14159 \def\Fld@name{#2}%
14160 \begingroup
14161 \expandafter\HyField@SetKeys\expandafter{%
14162 \DefaultOptionsofPushButton,#1%
14163 }%
14164 \PDFForm@Name
14165 \ifHy@pdfa
14166 \Hy@Error{%
14167 PDF/A: Push button with JavaScript is prohibited%
14168 }\@ehc
14169 \LayoutPushButtonField{%
14170 \leavevmode
14171 \MakeButtonField{#2}%
14172 }%
14173 \else
14174 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14175 \HyField@FlagsPushButton
14176 \ifFld@hidden\def\Fld@width{1sp}\fi
14177 \HyField@AdvanceAnnotCount
14178 \LayoutPushButtonField{%
14179 \leavevmode
14180 \Hy@escapeform\PDFForm@Push
14181 \@pdfm@mark{%
14182 ann @push\HyField@TheAnnotCount\space
14183 \dvipdfm@setdim
14184 <<\PDFForm@Push>>%
14185 }%
14186 }%
14187 \unhbox\pdfm@box
14188 \HyField@AddToFields{push}%
14189 \fi
14190 \endgroup
14191 }

\@Submit
14192 \def\@Submit[#1]#2{%
14193 \def\Fld@width{\DefaultWidthofSubmit}%
14194 \def\Fld@height{\DefaultHeightofSubmit}%
14195 \begingroup
14196 \expandafter\HyField@SetKeys\expandafter{%
14197 \DefaultOptionsofSubmit,#1%
14198 }%
14199 \HyField@FlagsPushButton
14200 \HyField@FlagsSubmit
14201 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

14202 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14203 \leavevmode
14204 \Hy@escapeform\PDFForm@Submit
14205 \HyField@AdvanceAnnotCount
14206 \@pdfm@mark{%
14207   ann @submit\HyField@TheAnnotCount\space
14208   \dvipdfm@setdim
14209   <<\PDFForm@Submit>>%
14210 }%
14211 \unhbox\pdfm@box%
14212 \HyField@AddToFields{submit}%
14213 \endgroup
14214 }

```

\@Reset

```

14215 \def\@Reset[#1]#2{%
14216   \def\Fld@width{\DefaultWidthofReset}%
14217   \def\Fld@height{\DefaultHeightofReset}%
14218   \begingroup
14219   \expandafter\HyField@SetKeys\expandafter{%
14220     \DefaultOptionsofReset,#1%
14221   }%
14222   \leavevmode
14223   \ifHy@pdfa
14224     \Hy@Error{%
14225       PDF/A: Reset action is prohibited%
14226     }\@ehc
14227     \MakeButtonField{#2}%
14228   \else
14229     \HyField@FlagsPushButton
14230     \ifFld@hidden\def\Fld@width{1sp}\fi
14231     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14232     \Hy@escapeform\PDFForm@Reset
14233     \HyField@AdvanceAnnotCount
14234     \@pdfm@mark{%
14235       ann @reset\HyField@TheAnnotCount\space
14236       \dvipdfm@setdim
14237       <<\PDFForm@Reset>>%
14238     }%
14239     \unhbox\pdfm@box
14240     \HyField@AddToFields{reset}%
14241   \fi
14242   \endgroup
14243 }

```

\@CheckBox

```

14244 \def\@CheckBox[#1]#2{% parameters, label
14245   \def\Fld@name{#2}%
14246   \def\Fld@default{0}%
14247   \begingroup

```

```

14248 \def\Fld@width{\DefaultWidthofCheckBox}%
14249 \def\Fld@height{\DefaultHeightofCheckBox}%
14250 \expandafter\HyField@SetKeys\expandafter{%
14251   \DefaultOptionsofCheckBox,#1%
14252 }%
14253 \PDFForm@Name
14254 \HyField@FlagsCheckBox
14255 \ifFld@hidden\def\Fld@width{1sp}\fi
14256 \setbox\pdfm@box=\hbox{%
14257   \MakeCheckField{\Fld@width}{\Fld@height}%
14258 }%
14259 \HyField@AdvanceAnnotCount
14260 \LayoutCheckField{#2}{%
14261   \leavevmode
14262   \Hy@escapeform\PDFForm@Check
14263   \@pdfm@mark{%
14264     ann @check\HyField@TheAnnotCount\space
14265     \dvipdfm@setdim
14266     <<\PDFForm@Check>>%
14267   }%
14268   \unhbox\pdfm@box
14269   \HyField@AddToFields{check}%
14270 }%
14271 \endgroup
14272 }

14273 \def\Hy@FormObjects{%
14274   \@pdfm@mark{obj @OBJpdfdocencoding%
14275     <<%
14276       /Type/Encoding%
14277       /Differences[
14278         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14279         39/quotesingle %
14280         96/grave %
14281         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14282         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14283         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14284         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14285         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14286         160/Euro %
14287         164/currency %
14288         166/brokenbar %
14289         168/dieresis/copyright/ordfeminine %
14290         172/logicalnot/.notdef/registered/macron/degree/plusminus%
14291         /twosuperior/threesuperior/acute/mu %
14292         183/periodcentered/cedilla/onesuperior/ordmasculine %
14293         188/onequarter/onehalf/threequarters %
14294         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14295         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14296         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%

```



```

14297      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14298      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14299      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14300      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14301      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14302      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14303      /thorn/ydieresis%
14304      ]%
14305      >>%
14306      }%
14307      \@pdfm@mark{obj @OBJZaDb%
14308      <<%
14309      /Type/Font%
14310      /Subtype/Type1%
14311      /Name/ZaDb%
14312      /BaseFont/ZapfDingbats%
14313      >>%
14314      }%
14315      \@pdfm@mark{obj @OBJHelv%
14316      <<%
14317      /Type/Font%
14318      /Subtype/Type1%
14319      /Name/Helv%
14320      /BaseFont/Helvetica%
14321      /Encoding @OBJpdfdocencoding%
14322      >>%
14323      }%
14324      \global\let\Hy@FormObjects\relax
14325      }
14326      </dvipdfm | xetex>

```

48.6 Common forms part

```

14327 <*pdfform>

\Fld@pageobjref

14328 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

14329 \begingroup\expandafter\expandafter\expandafter\endgroup
14330 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14331   \let\Hy@escapestring\@firstofone
14332   \def\Hy@escapeform#1{%
14333     \ifHy@pdfescapeform
14334       \def\Hy@escapestring##1{%
14335         \noexpand\Hy@escapestring{\noexpand##1}%
14336       }%
14337     \edef\Hy@temp{#1}%
14338     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14339     \def\Hy@escapestring##1{%

```

```

14340 \ifundefined{Hy@esc@\string##1}{%
14341   ##1%
14342   \ThisShouldNotHappen
14343 }{%
14344   \csname Hy@esc@\string##1\endcsname
14345 }%
14346 }%
14347 \else
14348   \let\Hy@escapestring\@firstofone
14349 \fi
14350 }%
14351 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14352   \ifx\#3\%
14353   \else
14354     \expandafter
14355     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14356     \ltx@ReturnAfterFi{%
14357       \Hy@@escapeform#3\@nil
14358     }%
14359   \fi
14360 }%
14361 \else
14362 \def\Hy@escapeform#1{%
14363   \ifHy@pdfescapeform
14364     \let\Hy@escapestring\pdfescapestring
14365   \else
14366     \let\Hy@escapestring\@firstofone
14367   \fi
14368 }%
14369 \Hy@escapeform{}%
14370 \fi

```

\PDFForm@Name

```

14371 \def\PDFForm@Name{%
14372   \PDFForm@@Name\Fld@name
14373   \ifx\Fld@altname\relax
14374   \else
14375     \PDFForm@@Name\Fld@altname
14376   \fi
14377   \ifx\Fld@mappingname\relax
14378   \else
14379     \PDFForm@@Name\Fld@mappingname
14380   \fi
14381 }

```

\PDFForm@@Name

```

14382 \def\PDFForm@@Name#1{%
14383   \begingroup
14384   \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
14385     \ifHy@unicode

```

```

14386      \Hy@unicodedefalse
14387      \fi
14388      \fi
14389      \pdfstringdef\Hy@gtemp#1%
14390      \endgroup
14391      \let#1\Hy@gtemp
14392  }

```

\Fld@additionalactions

```

14393 \def\Fld@@additionalactions{%
K input (keystroke) format
14394 \ifx\Fld@keystroke@code\@empty
14395 \else
14396 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14397 \fi
F display format
14398 \ifx\Fld@format@code\@empty
14399 \else
14400 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14401 \fi
V validation
14402 \ifx\Fld@validate@code\@empty
14403 \else
14404 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14405 \fi
C calculation
14406 \ifx\Fld@calculate@code\@empty
14407 \else
14408 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14409 \fi
Fo receiving the input focus
14410 \ifx\Fld@onfocus@code\@empty
14411 \else
14412 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14413 \fi
Bl loosing the input focus (blurred)
14414 \ifx\Fld@onblur@code\@empty
14415 \else
14416 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14417 \fi
D pressing the mouse button (down)
14418 \ifx\Fld@onmousedown@code\@empty
14419 \else
14420 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14421 \fi

```

U releasing the mouse button (up)

```
14422 \ifx\Fld@onmouseup@code\@empty
14423 \else
14424 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14425 \fi
```

E cursor enters the annotation's active area.

```
14426 \ifx\Fld@onenter@code\@empty
14427 \else
14428 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14429 \fi
```

X cursor exits the annotation's active area.

```
14430 \ifx\Fld@onexit@code\@empty
14431 \else
14432 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14433 \fi
14434 }
14435 \def\Fld@additionalactions{%
14436 \if\Fld@@additionalactions-%
14437 \else
14438 \ifHy@pdfa
14439 \else
14440 /AA<<\Fld@@additionalactions>>%
14441 \fi
14442 \fi
14443 }
```

\Fld@annotnames

```
14444 \def\Fld@annotnames{%
14445 /T(\Fld@name)%
14446 \ifx\Fld@altname\relax
14447 \else
14448 /TU(\Fld@altname)%
14449 \fi
14450 \ifx\Fld@mappingname\relax
14451 \else
14452 /TM(\Fld@mappingname)%
14453 \fi
14454 }
```

\PDFForm@Check

```
14455 \def\PDFForm@Check{%
14456 /Subtype/Widget%
14457 \Fld@annotflags
14458 \Fld@pageobjref
14459 \Fld@annotnames
14460 /FT/Btn%
14461 \Fld@flags
14462 /Q \Fld@align
```

```

14463 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14464 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14465 /MK<<%
14466 \ifnum\Fld@rotation=\z@
14467 \else
14468 /R \Fld@rotation
14469 \fi
14470 \ifx\Fld@bordercolor\relax
14471 \else
14472 /BC[\Fld@bordercolor]%
14473 \fi
14474 \ifx\Fld@bcolor\relax
14475 \else
14476 /BG[\Fld@bcolor]%
14477 \fi
14478 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14479 >>%
14480 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14481 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14482 /H/P%
14483 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14484 \Fld@additionalactions
14485 }

```

\PDFForm@Push

```

14486 \ifHy@pdfa
14487 \else
14488 \def\PDFForm@Push{%
14489 /Subtype/Widget%
14490 \Fld@annotflags
14491 \Fld@pageobjref
14492 \Fld@annotnames
14493 /FT/Btn%
14494 \Fld@flags
14495 /H/P%
14496 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14497 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14498 \ifx\Fld@bordercolor\relax\else 1\fi
14499 \space
14500 \else
14501 /MK<<%
14502 \ifnum\Fld@rotation=\z@
14503 \else
14504 /R \Fld@rotation
14505 \fi
14506 \ifx\Fld@bordercolor\relax
14507 \else
14508 /BC[\Fld@bordercolor]%
14509 \fi
14510 >>%

```

```

14511 \fi
14512 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14513 \Fld@additionalactions
14514 }%
14515 \fi

```

\PDFForm@List

```

14516 \def\PDFForm@List{%
14517 /Subtype/Widget%
14518 \Fld@annotflags
14519 \Fld@pageobjref
14520 \Fld@annotnames
14521 /FT/Ch%
14522 \Fld@flags
14523 /Q \Fld@align
14524 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14525 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14526 \ifx\Fld@bordercolor\relax\else 1\fi
14527 \ifx\Fld@bcolor\relax \else 1\fi
14528 \space
14529 \else
14530 /MK<<%
14531 \ifnum\Fld@rotation=\z@
14532 \else
14533 /R \Fld@rotation
14534 \fi
14535 \ifx\Fld@bordercolor\relax
14536 \else
14537 /BC[\Fld@bordercolor]%
14538 \fi
14539 \ifx\Fld@bcolor\relax
14540 \else
14541 /BG[\Fld@bcolor]%
14542 \fi
14543 >>%
14544 \fi
14545 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14546 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14547 \Fld@choices
14548 \Fld@additionalactions
14549 }

```

\PDFForm@Radio

```

14550 \def\PDFForm@Radio{%
14551 /Subtype/Widget%
14552 \Fld@annotflags
14553 \Fld@pageobjref
14554 \Fld@annotnames
14555 /FT/Btn%
14556 \Fld@flags

```

```

14557 /H/P%
14558 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14559 /MK<<%
14560 \ifnum\Fld@rotation=\z@
14561 \else
14562 /R \Fld@rotation
14563 \fi
14564 \ifx\Fld@bordercolor\relax
14565 \else
14566 /BC[\Fld@bordercolor]%
14567 \fi
14568 \ifx\Fld@bcolor\relax
14569 \else
14570 /BG[\Fld@bcolor]%
14571 \fi
14572 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14573 >>%
14574 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14575 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14576 \ifx\Fld@default\@empty
14577 /V/Off%
14578 /DV/Off%
14579 \else
14580 /V/\Fld@default
14581 /DV/\Fld@default
14582 \fi
14583 \Fld@additionalactions
14584 }

```

\PDFForm@Text

```

14585 \def\PDFForm@Text{%
14586 /Subtype/Widget%
14587 \Fld@annotflags
14588 \Fld@pageobjref
14589 \Fld@annotnames
14590 /FT/Tx%
14591 \Fld@flags
14592 /Q \Fld@align
14593 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14594 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14595 \ifx\Fld@bordercolor\relax\else 1\fi
14596 \ifx\Fld@bcolor\relax \else 1\fi
14597 \space
14598 \else
14599 /MK<<%
14600 \ifnum\Fld@rotation=\z@
14601 \else
14602 /R \Fld@rotation

```

```

14603     \fi
14604     \ifx\Fld@bordercolor\relax
14605     \else
14606         /BC[\Fld@bordercolor]%
14607     \fi
14608     \ifx\Fld@bcolor\relax
14609     \else
14610         /BG[\Fld@bcolor]%
14611     \fi
14612     >>%
14613 \fi
14614 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14615     \ifx\Fld@color\empty\else\space\Fld@color\fi)%
14616 /DV(\Hy@escapestring{\Fld@default})%
14617 /V(\Hy@escapestring{\Fld@value})%
14618 \Fld@additionalactions
14619 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14620 }

```

\PDFForm@Submit

```

14621 \def\PDFForm@Submit{%
14622 /Subtype/Widget%
14623 \Fld@annotflags
14624 \Fld@pageobjref
14625 \Fld@annotnames
14626 /FT/Btn%
14627 \Fld@flags
14628 /H/P%
14629 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14630 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14631     \ifx\Fld@bordercolor\relax\else 1\fi
14632     \space
14633 \else
14634 /MK<<%
14635     \ifnum\Fld@rotation=\z@
14636     \else
14637         /R \Fld@rotation
14638     \fi
14639     \ifx\Fld@bordercolor\relax
14640     \else
14641         /BC[\Fld@bordercolor]%
14642     \fi
14643     >>%
14644 \fi
14645 /A<<%
14646 /S/SubmitForm%
14647 /F<<%
14648     /FS/URL%
14649     /F(\Hy@escapestring{\Form@action})%
14650     >>%

```



```

14651   \Fld@submitflags
14652   >>%
14653   \Fld@additionalactions
14654 }

\PDFForm@Reset

14655 \ifHy@pdfa
14656 \else
14657   \def\PDFForm@Reset{%
14658     /Subtype/Widget%
14659     \Fld@annotflags
14660     \Fld@pageobjref
14661     \Fld@annotnames
14662     /FT/Btn%
14663     \Fld@flags
14664     /H/P%
14665     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14666     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
14667       \ifx\Fld@bordercolor\relax\else 1\fi
14668       \space
14669     \else
14670       /MK<<%
14671       \ifnum\Fld@rotation=\z@
14672       \else
14673         /R \Fld@rotation
14674       \fi
14675       \ifx\Fld@bordercolor\relax
14676       \else
14677         /BC[\Fld@bordercolor]%
14678       \fi
14679     %   /CA (Clear)
14680     %   /AC (Done)
14681     >>%
14682     \fi
14683     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14684     /A<</S/ResetForm>>%
14685     \Fld@additionalactions
14686   }%
14687 \fi

14688 </pdfform>
14689 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
14690 \def\phantomsection{%
14691   \Hy@MakeCurrentHrefAuto{section*}%
14692   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14693 }
14694 \end{package}
```

49.1 Bookmarks

```
14695 \begin{outlines}
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
14696 \def\Hy@writebookmark#1#2#3#4#5{%
14697   % section number, text, label, level, file
14698   \ifx\WriteBookmarks\relax%
14699   \else
14700     \ifnum#4>\Hy@bookmarksdepth\relax
14701     \else
14702       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14703     \fi
14704   \fi
14705 }
14706 \def\Hy@currentbookmarklevel{0}
14707 \def\Hy@numberline#1{#1 }
14708 \def\@@writetorep#1#2#3#4#5{%
14709   \begingroup
14710     \edef\Hy@tempa{#5}%
14711     \ifx\Hy@tempa\Hy@bookmarkstype
14712       \edef\Hy@level{#4}%
```

```

14713 \ifx\Hy@levelcheck Y%
14714 \@tempcnta\Hy@level\relax
14715 \advance\@tempcnta by -1 %
14716 \ifnum\Hy@currentbookmarklevel<\@tempcnta
14717 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14718 \advance\@tempcnta by 1 %
14719 \Hy@Warning{%
14720     Difference (\the\@tempcnta) between bookmark levels is %
14721     greater \MessageBreak than one, level fixed%
14722 }%
14723 \@tempcnta\Hy@currentbookmarklevel
14724 \advance\@tempcnta by 1 %
14725 \edef\Hy@level{\the\@tempcnta}%
14726 \fi
14727 \else
14728 \global\let\Hy@levelcheck Y%
14729 \fi
14730 \global\let\Hy@currentbookmarklevel\Hy@level
14731 \@tempcnta\Hy@level\relax
14732 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14733 \advance\@tempcnta by -1 %
14734 \edef\Hy@tempa{#3}%
14735 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14736 \ifx\Hy@tempa\Hy@tempb
14737 \Hy@Warning{%
14738     The anchor of a bookmark and its parent's must not%
14739     \MessageBreak be the same. Added a new anchor%
14740 }%
14741 \phantomsection
14742 \fi
14743 \ifHy@bookmarksnumbered
14744 \let\numberline\Hy@numberline
14745 \let\booknumberline\Hy@numberline
14746 \let\partnumberline\Hy@numberline
14747 \let\chapternumberline\Hy@numberline
14748 \else
14749 \let\numberline\@gobble
14750 \let\booknumberline\@gobble
14751 \let\partnumberline\@gobble
14752 \let\chapternumberline\@gobble
14753 \fi
14754 \pdfstringdef\Hy@tempa{#2}%
14755 \HyPsd@SanitizeForOutFile\Hy@tempa
14756 \if@filesn
14757 \stepcounter{bookmark@seq@number}%
14758 \@ifundefined{@outlinefile}{%
14759 }{%
14760 \protected@write\@outlinefile{}{%
14761 \protect\BOOKMARK
14762 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%

```

```

14763         {\Hy@tempa}{\Hy@tempb}%
14764         \@percentchar\space\thebookmark@seq@number
14765     }%
14766 }%
14767 \fi
14768 \fi
14769 \endgroup
14770 }
14771 \newcounter{bookmark@seq@number}

14772 \begingroup
14773 \lccode`=(`{%
14774 \lccode`=)`}%
14775 \lccode`1=\z@
14776 \lccode`2=\z@
14777 \lccode`3=\z@
14778 \lccode`5=\z@
14779 \lccode`7=\z@
14780 \lccode`\#=\z@
14781 \lccode`\`=\z@
14782 \lccode`\{=\z@
14783 \lccode`\}= \z@
14784 \lowercase{%
14785 \endgroup
14786 \def\HyPsd@SanitizeForOutFile#1{%
14787     \@onelevel@sanitize\Hy@tempa
14788     \escapechar`\\%
14789     \edef\Hy@tempa{%
14790         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14791     }%
14792     \edef\Hy@tempa{%
14793         \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14794     }%
14795 }%
14796 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14797     #1%
14798     \ifx\\#2\\%
14799         \expandafter\ltx@gobble
14800     \else
14801         \expandafter\ltx@firstofone
14802     \fi
14803     {%
14804         \string\173%
14805         \HyPsd@SanitizeOut@BraceLeft#2\@nil
14806     }%
14807 }%
14808 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14809     #1%
14810     \ifx\\#2\\%
14811         \expandafter\ltx@gobble

```

```

14812 \else
14813 \expandafter\ltx@firstofone
14814 \fi
14815 {%
14816 \string\175%
14817 \HyPsd@SanitizeOut@BraceRight#2\@nil
14818 }%
14819 }%
14820 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14821 \newcommand{\currentpdfbookmark}{%
14822 \pdfbookmark[\Hy@currentbookmarklevel]%
14823 }
14824 \newcommand{\subpdfbookmark}{%
14825 \@tempcnta\Hy@currentbookmarklevel
14826 \Hy@StepCount\@tempcnta
14827 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14828 }
14829 \newcommand{\belowpdfbookmark}[2]{%
14830 \@tempcnta\Hy@currentbookmarklevel
14831 \Hy@StepCount\@tempcnta
14832 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14833 \advance\@tempcnta by -1 %
14834 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14835 }

```

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.

```

14836 \renewcommand\pdfbookmark[3][0]{%
14837 \Hy@writebookmark{}{#2}{#3.#1}{#1}{toc}%
14838 \hyper@anchorstart{#3.#1}\hyper@anchorend
14839 }
14840 \def\BOOKMARK{%
14841 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14842 }
14843 \def\@BOOKMARK[#1]{%
14844 \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
14845 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14846 \RequirePackage{rerunfilecheck}[2009/12/10]
14847 \def\Hy@OutlineRerunCheck{%
14848 \RerunFileCheck{\jobname.out}{%

```

```

14849 \immediate\closeout\@outlinefile
14850 }{%
14851 Rerun to get outlines right\MessageBreak
14852 or use package `bookmark'%
14853 }%
14854 }

```

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 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.

```

14855 <*vtex>
14856 \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.

```

14857 \begingroup
14858 \catcode\'=12 %
14859 \ifnum\Hy@VTeXversion<650 %
14860 \catcode\`=12 %
14861 \gdef\hv@pdf@char#1#2#3{%
14862 \char
14863 \ifcase'#1#2#3 %
14864 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14865 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14866 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14867 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14868 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14869 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14870 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14871 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14872 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14873 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14874 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14875 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14876 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14877 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14878 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14879 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14880 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14881 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14882 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14883 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14884 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14885 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%

```

```

14886 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14887 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14888 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14889 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14890 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14891 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14892 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14893 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14894 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14895 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14896 \fi
14897 }%
14898 \else
14899 \gdef\hv@pdf@char{\char'}%
14900 \fi
14901 \endgroup

```

\@@BOOKMARK

```

14902 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14903 \expandafter\edef\csname @count@#3\endcsname{%
14904 \the\@serial@counter
14905 }%
14906 \edef\@mycount{\the\@serial@counter}%
14907 \Hy@StepCount\@serial@counter
14908 \edef\@parcount{%
14909 \expandafter\ifx\csname @count@#5\endcsname\relax
14910 0%
14911 \else
14912 \csname @count@#5\endcsname
14913 \fi
14914 }%
14915 \immediate\special{%
14916 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14917 s=\ifx#2-c\else o\fi,t=#4%
14918 }%
14919 }%

```

\ReadBookmarks

```

14920 \def\ReadBookmarks{%
14921 \begingroup
14922 \def\0{\hv@pdf@char 0}%
14923 \def\1{\hv@pdf@char 1}%
14924 \def\2{\hv@pdf@char 2}%
14925 \def\3{\hv@pdf@char 3}%
14926 \def\({}%
14927 \def\)}%
14928 \def\do##1{%
14929 \ifnum\catcode`##1=\active
14930 \@makeother##1%
14931 \else

```

```

14932     \ifnum\catcode`##1=6 %
14933     \@makeother##1%
14934     \fi
14935     \fi
14936 }%
14937 \dospecials
14938 \Hy@safe@activetrue
14939 \InputIfFileExists{\jobname.out}{-}{-}%
14940 \endgroup
14941 \ifx\WriteBookmarks\relax
14942 \else
14943     \if@filesw
14944         \newwrite\@outlinefile
14945         \Hy@OutlineRerunCheck
14946         \immediate\openout\@outlinefile=\jobname.out\relax
14947         \ifHy@typexml
14948             \immediate\write\@outlinefile{<relaxxml>\relax}%
14949         \fi
14950     \fi
14951 \fi
14952 }

14953 </vtex>
14954 <*\vtex>
14955 \def\ReadBookmarks{%
14956     \pdf@ifdraftmode{-}%
14957     \begingroup
14958         \def\do##1{%
14959             \ifnum\catcode`##1=\active
14960                 \@makeother##1%
14961             \else
14962                 \ifnum\catcode`##1=6 %
14963                     \@makeother##1%
14964                 \fi
14965             \fi
14966         }%
14967         \dospecials
14968         \Hy@safe@activetrue
14969         \escapechar=`\%
14970         \def\@BOOKMARK[##1][##2]##3##4##5{%
14971             \calc@bm@number{##5}%
14972         }%
14973         \InputIfFileExists{\jobname.out}{-}{-}%
14974         \ifx\WriteBookmarks\relax
14975             \global\let\WriteBookmarks\relax
14976         \fi
14977         \def\@BOOKMARK[##1][##2]##3##4##5{%
14978             \def\Hy@temp{##4}%
14979 <*\pdfTeX>
14980             \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%

```



```

14981 \Hy@OutlineName{}\Hy@pstringName{%
14982   ##2\check@bm@number{##3}%
14983 }{%
14984   \expandafter\strip@prefix\meaning\Hy@temp
14985 }%
14986 </pdfTex>
14987 <*pdfmark>
14988   \pdfmark{%
14989     pdfmark=/OUT,%
14990     Count={##2\check@bm@number{##3}},%
14991     Dest={##3},%
14992     Title=\expandafter\strip@prefix\meaning\Hy@temp
14993   }%
14994 </pdfmark>
14995 <*dvipdfm|xetex>
14996   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14997   \@pdfm@mark{%
14998     outline \ifHy@DvipdfmxOutlineOpen
14999       [%
15000         \ifnum##21>\z@
15001         \else
15002         -%
15003         \fi
15004       ] %
15005       \fi
15006       ##1<<%
15007       /Title\expandafter\strip@prefix\meaning\Hy@temp)%
15008       /A<<%
15009       /S/GoTo%
15010       /D(\Hy@pstringName)%
15011       >>%
15012       >>%
15013     }%
15014 </dvipdfm|xetex>
15015   }%
15016   \begingroup
15017   \def\WriteBookmarks{0}%
15018   \InputIfFileExists\jobname.out\{ }\{ }\%
15019   \endgroup
15020   %{\escapechar\m@ne\InputIfFileExists\jobname.out\{ }\{ }\}%
15021   \endgroup
15022 }%
15023 \ifx\WriteBookmarks\relax
15024 \else
15025   \if@files
15026     \newwrite\@outlinefile
15027     \Hy@OutlineRerunCheck
15028     \immediate\openout\@outlinefile=\jobname.out\relax
15029     \ifHy@typexml
15030       \immediate\write\@outlinefile{<relaxxml>\relax}%

```

```

15031 \fi
15032 \fi
15033 \fi
15034 }
15035 <*pdftex>
15036 \def\Hy@OutlineName#1#2#3#4{%
15037 \pdfoutline goto name{#2}count#3{#4}%
15038 }
15039 </pdftex>
15040 \def\check@bm@number#1{%
15041 \expandafter\ifx\csname B_#1\endcsname\relax
15042 0%
15043 \else
15044 \csname B_#1\endcsname
15045 \fi
15046 }
15047 \def\calc@bm@number#1{%
15048 \@tempcnta=\check@bm@number{#1}\relax
15049 \advance\@tempcnta by 1 %
15050 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15051 }
15052 </!vtex>
15053 \ifHy@implicit
15054 \else
15055 \expandafter\endinput
15056 \fi
15057 </outlines>
15058 <*outlines | hypertext>
15059 \newlength\Hy@SectionHShift
15060 \def\Hy@SectionAnchorHref#1{%
15061 \ifx\protect\@typeset@protect
15062 \Hy@@SectionAnchor{#1}%
15063 \fi
15064 }
15065 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
15066 \leavevmode
15067 \hbox to 0pt{%
15068 \kern-\Hy@SectionHShift
15069 \Hy@raisedlink{%
15070 \hyper@anchorstart{#1}\hyper@anchorend
15071 }%
15072 \hss
15073 }%
15074 }
15075 \let\H@old@ssect\@ssect
15076 \def\@ssect#1#2#3#4#5{%
15077 \Hy@MakeCurrentHrefAuto{section*}%
15078 \setlength{\Hy@SectionHShift}{#1}%
15079 \begingroup

```

```

15080 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15081 \toks\tw@\expandafter{%
15082 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15083 #5%
15084 }%
15085 \edef\x{\endgroup
15086 \the\toks@{\the\toks\tw@}%
15087 }\x
15088 }
15089 \let\H@old@schapter\@schapter
15090 \def\@schapter#1{%
15091 \begingroup
15092 \let\@mkboth\@gobbletwo
15093 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15094 \Hy@raisedlink{%
15095 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15096 }%
15097 \endgroup
15098 \H@old@schapter{#1}%
15099 }

```

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:

```

15100 \ltx@ifundefined{@chapter}{-}{%
15101 \let\Hy@org@chapter\@chapter
15102 \def\@chapter{%
15103 \def\Hy@next{%
15104 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15105 \Hy@raisedlink{%
15106 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15107 }%
15108 }%
15109 \ifnum\c@secnumdepth>\m@ne
15110 \ltx@ifundefined{if@mainmatter}{%
15111 \iftrue{\csname if@mainmatter\endcsname}%
15112 \let\Hy@next\relax
15113 \fi
15114 \fi
15115 \Hy@next
15116 \Hy@org@chapter
15117 }%
15118 }
15119 \let\H@old@part\@part
15120 \begingroup\expandafter\expandafter\expandafter\endgroup
15121 \expandafter\ifx\csname chapter\endcsname\relax
15122 \let\Hy@secnum@part\z@
15123 \else
15124 \let\Hy@secnum@part\m@ne
15125 \fi

```

```

15126 \def\@part{%
15127   \ifnum\Hy@secnum@part>\c@secnumdepth
15128     \phantomsection
15129   \fi
15130   \H@old@part
15131 }

15132 \let\H@old@spart\@spart
15133 \def\@spart#1{%
15134   \Hy@MakeCurrentHrefAuto{part*}%
15135   \Hy@raisedlink{%
15136     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15137   }%
15138   \H@old@spart{#1}%
15139 }

15140 \let\H@old@sect\@sect
15141 \def\@sect#1#2#3#4#5#6[#7]#8{%
15142   \ifnum #2>\c@secnumdepth
15143     \expandafter\@firstoftwo
15144   \else
15145     \expandafter\@secondoftwo
15146   \fi
15147   {%
15148     \Hy@MakeCurrentHrefAuto{section*}%
15149     \setlength{\Hy@SectionHShift}{#3}%
15150     \begingroup
15151       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15152       \toks\tw@\expandafter{%
15153         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15154         #8%
15155       }%
15156       \edef\x{\endgroup
15157         \the\toks@{\the\toks\tw@}}%
15158       }\x
15159     }{%
15160       \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15161     }%
15162 }

15163 </outlines | hypertext>
15164 <*outlines>

15165 \expandafter\def\csname Parent-4\endcsname{}
15166 \expandafter\def\csname Parent-3\endcsname{}
15167 \expandafter\def\csname Parent-2\endcsname{}
15168 \expandafter\def\csname Parent-1\endcsname{}
15169 \expandafter\def\csname Parent0\endcsname{}
15170 \expandafter\def\csname Parent1\endcsname{}
15171 \expandafter\def\csname Parent2\endcsname{}
15172 \expandafter\def\csname Parent3\endcsname{}
15173 \expandafter\def\csname Parent4\endcsname{}
15174 </outlines>

```

50 Compatibility with koma-script classes

15175 <*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.

```
15176 \def\Hy@tempa{%
15177   \def\@addchap{##1}##2{%
15178     \typeout{##2}%
15179     \if@twoside
15180       \mkboth{##1}{}%
15181     \else
15182       \mkboth{}{##1}%
15183     \fi
15184     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15185     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15186     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15187     \Hy@raisedlink{%
15188       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15189     }%
15190     \if@twocolumn
15191       \topnewpage[\@makeschapterhead{##2}]%
15192     \else
15193       \@makeschapterhead{##2}%
15194       \@afterheading
15195     \fi
15196     \addcontentsline{toc}{chapter}{##1}%
15197   }%
15198 }
15199 \ifclassloaded{scrbook}{%
15200   \ifclasslater{scrbook}{2001/01/01}{%
15201     \let\Hy@tempa\@empty
15202   }{}%
15203 }{%
15204   \ifclassloaded{scrreprt}{%
15205     \ifclasslater{scrreprt}{2001/01/01}{%
15206       \let\Hy@tempa\@empty
15207     }{}%
15208   }{%
15209     \let\Hy@tempa\@empty
15210   }%
15211 }%
15212 \Hy@tempa
15213 </outlines | hypertex>
```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```
15214 <*pd1enc>
15215 \DeclareFontEncoding{PD1}{}{ }

Accents
15216 \DeclareTextAccent{`}{PD1}{\textasciigrave}
15217 \DeclareTextAccent{'}{PD1}{\textacute}
15218 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15219 \DeclareTextAccent{~}{PD1}{\texttilde}
15220 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
15221 \DeclareTextAccent{r}{PD1}{\textring}
15222 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15223 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15224 \DeclareTextAccent{c}{PD1}{\textcedilla}
15225 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15226 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15227 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15228 \DeclareTextCompositeCommand{`}{PD1}{\@empty}{\textasciigrave}
15229 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
15230 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
15231 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
15232 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
15233 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
15234 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
15235 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
15236 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
15237 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
15238 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
15239 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
15240 \DeclareTextCompositeCommand{`}{PD1}{\ }{\textasciigrave}
15241 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
15242 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
15243 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
15244 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
15245 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}
15246 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
15247 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
15248 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
15249 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
15250 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
15251 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
15252 \DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k{#1}}#1}
15253 \DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t{#1}}#1}
```

```

15254 \DeclareTextCommand{\newtie}{PD1}{1}{%
15255 \TextSymbolUnavailable{\newtie{#1}}#1%
15256 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15257 % U+0009 (CHARACTER TABULATION)
15258 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15259 % U+000A (LINE FEED)
15260 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15261 % U+000D (CARRIAGE RETURN)
15262 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15263 % U+02D8 BREVE; breve
15264 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15265 % U+02C7 CARON; caron
15266 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15267 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15268 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15269 % U+02D9 DOT ABOVE; dotaccent
15270 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15271 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15272 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15273 % U+02DB OGONEK; ogonek
15274 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15275 % U+02DA RING ABOVE; ring
15276 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15277 % U+02DC SMALL TILDE; ilde, *tilde
15278 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

15279 % U+0022 QUOTATION MARK; quotedbl
15280 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15281 % U+0023 NUMBER SIGN; numbersign
15282 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15283 % U+0024 DOLLAR SIGN; dollar
15284 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15285 % U+0025 PERCENT SIGN; percent
15286 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15287 % U+0026 AMPERSAND; ampersand
15288 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

```

15289 % U+0028 LEFT PARENTHESIS; parenleft
15290 \DeclareTextCommand{\textparenleft}{PD1}{\string\}% \050 U+0028
15291 % U+0029 RIGHT PARENTHESIS; parenright
15292 \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
15293 % U+002E FULL STOP; period
15294 \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
15295 % U+003C LESS-THAN SIGN; less
15296 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
15297 % U+003E GREATER-THAN SIGN; greater
15298 \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
15299 % U+005C REVERSE SOLIDUS; backslash
15300 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
15301 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
15302 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
\135: U+005D RIGHT SQUARE BRACKET; bracketright
15303 % U+005E CIRCUMFLEX ACCENT; asciicircum
15304 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
15305 % U+005F LOW LINE; underscore
15306 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15307 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15308 % U+0060 GRAVE ACCENT; grave
15309 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
15310 % U+0069 LATIN SMALL LETTER I; i
15311 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
15312 % U+007B LEFT CURLY BRACKET; braceleft
15313 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
15314 % U+007C VERTICAL LINE; *bar, verticalbar
15315 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C

15316 % U+007D RIGHT CURLY BRACKET; braceright
15317 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15318 % U+007E TILDE; asciitilde
15319 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
15320 % U+2022 BULLET; bullet
15321 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
15322 % U+2020 DAGGER; dagger
15323 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
15324 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
15325 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
15326 \DeclareTextCommand{\textddagger}{PD1}{\textdagger}
15327 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15328 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
15329 % U+2014 EM DASH; emdash
15330 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
15331 % U+2013 EN DASH; endash
15332 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
15333 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15334 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
15335 % U+2044 FRACTION SLASH; fraction
15336 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
15337 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
15338 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
15339 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
inglright
15340 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
15341 % U+2212 MINUS SIGN; minus
15342 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
15343 % U+2030 PER MILLE SIGN; perthousand
15344 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15345 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15346 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15347 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15348 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15349 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15350 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15351 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15352 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
15353 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
15354 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
15355 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
15356 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
15357 % U+2122 TRADE MARK SIGN; trademark
15358 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
15359 % U+FB01 LATIN SMALL LIGATURE FI; fi
15360 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
15361 % U+FB02 LATIN SMALL LIGATURE FL; fl

15362 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
15363 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15364 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
15365 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15366 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
15367 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15368 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
15369 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15370 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
15371 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
15372 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15373 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
15374 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15375 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
15376 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15377 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
15378 % U+0153 LATIN SMALL LIGATURE OE; oe
15379 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
15380 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15381 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
15382 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15383 \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.
15384 % U+20AC EURO SIGN; *Euro, euro
15385 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
15386 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15387 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
15388 % U+00A2 CENT SIGN; cent
15389 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
15390 % U+00A3 POUND SIGN; sterling
15391 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
15392 % U+00A4 CURRENCY SIGN; currency
15393 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
15394 % U+00A5 YEN SIGN; yen
15395 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
15396 % U+00A6 BROKEN BAR; brokenbar
15397 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
15398 % U+00A7 SECTION SIGN; section
15399 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
15400 % U+00A8 DIAERESIS; dieresis
15401 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
15402 % U+00A9 COPYRIGHT SIGN; copyright
15403 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
15404 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15405 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
15406 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
15407 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB

15408 % U+00AC NOT SIGN; logicalnot
 15409 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15410 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15411 % U+00AE REGISTERED SIGN; registered
 15412 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15413 % U+00AF MACRON; *macron, overscore
 15414 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15415 % U+00B0 DEGREE SIGN; degree
 15416 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15417 % U+00B1 PLUS-MINUS SIGN; plusminus
 15418 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15419 % U+00B2 SUPERScript TWO; twosuperior
 15420 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15421 % U+00B3 SUPERScript THREE; threesuperior
 15422 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15423 % U+00B4 ACUTE ACCENT; acute
 15424 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15425 % U+00B5 MICRO SIGN; mu, mul
 15426 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15427 % U+00B6 PILCROW SIGN; paragraph
 15428 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 15429 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15430 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 15431 % U+00B8 CEDILLA; cedilla
 15432 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 15433 % U+00B9 SUPERScript ONE; onesuperior
 15434 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 15435 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15436 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 15437 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 15438 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 15439 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15440 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 15441 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 15442 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 15443 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 15444 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 15445 % U+00BF INVERTED QUESTION MARK; questiondown
 15446 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 15447 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 15448 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 15449 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 15450 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 15451 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 15452 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 15453 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 15454 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

15455 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15456 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
15457 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15458 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15459 % U+00C6 LATIN CAPITAL LETTER AE; AE
15460 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15461 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15462 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15463 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15464 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15465 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15466 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15467 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15468 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15469 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15470 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
15471 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15472 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15473 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15474 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15475 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15476 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15477 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15478 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15479 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15480 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15481 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15482 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15483 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15484 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15485 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15486 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15487 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15488 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15489 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15490 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15491 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15492 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15493 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15494 % U+00D7 MULTIPLICATION SIGN; multiply
15495 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15496 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15497 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15498 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15499 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15500 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15501 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15502 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15503 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15504 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis

15505 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15506 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15507 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
15508 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15509 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15510 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15511 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15512 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15513 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15514 \DeclareTextCompositeCommand{`}{PD1}{a}{\340}% U+00E0
15515 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15516 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
15517 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15518 \DeclareTextCompositeCommand{^}{PD1}{a}{\342}% U+00E2
15519 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15520 \DeclareTextCompositeCommand{~}{PD1}{a}{\343}% U+00E3
15521 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15522 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15523 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15524 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15525 % U+00E6 LATIN SMALL LETTER AE; ae
15526 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15527 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15528 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15529 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15530 \DeclareTextCompositeCommand{`}{PD1}{e}{\350}% U+00E8
15531 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15532 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
15533 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15534 \DeclareTextCompositeCommand{^}{PD1}{e}{\352}% U+00EA
15535 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15536 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
15537 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15538 \DeclareTextCompositeCommand{`}{PD1}{i}{\354}% U+00EC
15539 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
15540 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15541 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
15542 \DeclareTextCompositeCommand{'}{PD1}{\i}{\355}% U+00ED
15543 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15544 \DeclareTextCompositeCommand{^}{PD1}{i}{\356}% U+00EE
15545 \DeclareTextCompositeCommand{^}{PD1}{\i}{\356}% U+00EE
15546 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15547 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
15548 \DeclareTextCompositeCommand{"}{PD1}{\i}{\357}% U+00EF
15549 % U+00F0 LATIN SMALL LETTER ETH; eth
15550 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15551 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15552 \DeclareTextCompositeCommand{~}{PD1}{n}{\361}% U+00F1
15553 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15554 \DeclareTextCompositeCommand{`}{PD1}{o}{\362}% U+00F2

```

15555 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15556 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15557 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15558 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15559 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15560 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15561 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15562 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15563 % U+00F7 DIVISION SIGN; divide
15564 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15565 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15566 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15567 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15568 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15569 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15570 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15571 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15572 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15573 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15574 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15575 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15576 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15577 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15578 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15579 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15580 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15581 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15582 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15583 \DeclareTextCommand{\SS}{PD1}{SS}%
15584 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15585 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15586 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15587 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15588 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15589 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15590 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15591 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15592 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15593 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15594 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15595 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15596 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15597 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15598 \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).

```

15599 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15600 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15601 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15602 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15603 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15604 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15605 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15606 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15607 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15608 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15609 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15610 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15611 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15612 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15613 </pdlenc>

```

51.2 PU encoding

```

15614 <*puenc>
15615 \DeclareFontEncoding{PU}{-}{-}

```

51.2.1 NFSS2 accents

```

15616 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15617 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15618 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15619 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15620 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15621 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15622 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15623 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15624 % U+0304 COMBINING MACRON; macroncmb
15625 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15626 % U+0306 COMBINING BREVE; brevecmb
15627 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15628 \ifx\CYRDZE\@undefined \else
15629 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15630 \fi
15631 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15632 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15633 % U+0308 COMBINING DIAERESIS; dieresiscmb
15634 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15635 % U+030A COMBINING RING ABOVE; ringcmb
15636 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15637 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15638 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15639 % U+030C COMBINING CARON; caroncmb
15640 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15641 </puenc>

```

```

15642 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15643 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15644 \*puenc)
15645 \ifx\CYRDZE\@undefined \else
15646 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15647 \fi
15648 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15649 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15650 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15651 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15652 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15653 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15654 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15655 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15656 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15657 % U+0327 COMBINING CEDILLA; cedillacmb
15658 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15659 % U+0328 COMBINING OGONEK; ogonekcmb
15660 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15661 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15662 % \textsubcircum (tipa)
15663 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15664 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15665 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15666 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15667 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15668 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15669 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15670 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15671 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15672 % U+20DD COMBINING ENCLOSING CIRCLE
15673 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15674 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15675 \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.

```

15676 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15677 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15678 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15679 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15680 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15681 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textstring}%
15682 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15683 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15684 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15685 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%

```



```

15686 </puenc>
15687 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15688 <*puenc>
15689 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15690 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15691 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15692 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
15693 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
15694 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\texttringlow}%
15695 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
low}%
15696 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
15697 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15698 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15699 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15700 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15701 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15702 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15703 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U+
15704 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U+
15705 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15706 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15707 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15708 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15709 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15710 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15711 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15712 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15713 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15714 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15715 </puenc>
15716 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15717 <*puenc>
15718 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15719 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15720 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15721 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15722 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15723 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttringlow}%
15724 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15725 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15726 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildebelow}%
15727 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15728 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15729 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15730 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15731 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15732 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15733 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15734 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15735 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15736 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15737 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15738 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15739 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15740 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15741 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15742 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15743 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15744 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15745 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15746 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15747 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15748 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

15749 % U+0009 (CHARACTER TABULATION)
15750 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15751 % U+000A (LINE FEED)
15752 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15753 % U+000D (CARRIAGE RETURN)
15754 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

15755 % U+0022 QUOTATION MARK; quotedbl
15756 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15757 % U+0023 NUMBER SIGN; numbersign
15758 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15759 % U+0024 DOLLAR SIGN; dollar
15760 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15761 %* \textdollar -> \mathdollar
15762 %* \textdollar -> \EyesDollar (marvosym)
15763 % U+0025 PERCENT SIGN; percent
15764 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15765 % U+0026 AMPERSAND; ampersand
15766 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15767 %* \textampersand -> \binampersand (stmaryrd)
15768 %* \textampersand -> \with (cmll)
15769 % U+0027 APOSTROPHE; quotesingle
15770 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15771 % U+0028 LEFT PARENTHESIS; parenleft
15772 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15773 % U+0029 RIGHT PARENTHESIS; parenright
15774 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15775 % U+002A ASTERISK; asterisk; (?)
15776 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A

```

15777 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15778 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15779 % U+002C COMMA; comma; \MVComma (marvosym)
15780 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15781 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15782 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15783 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15784 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15785 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15786 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15787 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15788 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15789 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15790 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15791 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15792 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15793 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15794 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15795 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15796 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15797 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15798 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15799 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15800 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15801 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15802 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15803 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15804 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15805 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15806 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
15807 % U+003C LESS-THAN SIGN; less
15808 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
15809 % U+003E GREATER-THAN SIGN; greater
15810 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
15811 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
15812 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
\80\101: U+0041 LATIN CAPITAL LETTER A; A
...
\80\132: U+005A LATIN CAPITAL LETTER Z; Z
\80\133: U+005B LEFT SQUARE BRACKET; bracketleft
15813 % U+005C REVERSE SOLIDUS; backslash
15814 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C

$\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
 15815 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15816 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15817 % U+005F LOW LINE; underscore
 15818 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15819 %* \textunderscore -> \mathunderscore (LaTeX)
 15820 % U+0060 GRAVE ACCENT; grave
 15821 \DeclareTextCommand{\textasciigrave}{PU}{\80\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
 15822 % U+0069 LATIN SMALL LETTER I; i
 15823 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
 15824 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\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
 15825 % U+007B LEFT CURLY BRACKET; braceleft
 15826 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 15827 % U+007C VERTICAL LINE; *bar, verticalbar
 15828 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 15829 %* \textbar -> \textvertline (tipa)
 15830 % U+007D RIGHT CURLY BRACKET; braceright
 15831 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 15832 % U+007E TILDE; asciitilde
 15833 \DeclareTextCommand{\textasciitilde}{PU}{\80\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
 15834 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15835 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 15836 % U+00A2 CENT SIGN; cent
 15837 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 15838 % U+00A3 POUND SIGN; sterling
 15839 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 15840 %* \textsterling -> \mathsterling (LaTeX)
 15841 %* \textsterling -> \pounds (LaTeX)
 15842 % U+00A4 CURRENCY SIGN; currency
 15843 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 15844 % U+00A5 YEN SIGN; yen
 15845 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 15846 % U+00A6 BROKEN BAR; brokenbar
 15847 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 15848 %* \textbrokenbar -> \brokenvert (wasysym)
 15849 % U+00A7 SECTION SIGN; section
 15850 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 15851 %* \textsection -> \mathsection (LaTeX)

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15852 %* \textsection -> \S (LaTeX)
15853 % U+00A8 DIAERESIS; dieresis
15854 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15855 % U+00A9 COPYRIGHT SIGN; copyright
15856 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15857 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15858 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15859 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
      motleft
15860 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15861 % U+00AC NOT SIGN; logicalnot
15862 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15863 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15864 % U+00AE REGISTERED SIGN; registered
15865 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15866 % U+00AF MACRON; *macron, overscore
15867 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15868 % U+00B0 DEGREE SIGN; degree
15869 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15870 % U+00B1 PLUS-MINUS SIGN; plusminus
15871 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15872 % U+00B2 SUPERScript TWO; twosuperior
15873 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15874 % U+00B3 SUPERScript THREE; threesuperior
15875 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15876 % U+00B4 ACUTE ACCENT; acute
15877 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15878 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15879 % U+00B5 MICRO SIGN; mu, mu1
15880 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15881 % U+00B6 PILCROW SIGN; paragraph
15882 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15883 %* \textparagraph -> \mathparagraph (LaTeX)
15884 % U+00B7 MIDDLE DOT; middot, *periodcentered
15885 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15886 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15887 %* \textperiodcentered -> \Squaredot (marvosym)
15888 % U+00B8 CEDILLA; cedilla
15889 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15890 % U+00B9 SUPERScript ONE; onesuperior
15891 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15892 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15893 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15894 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
      motright
15895 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15896 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15897 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC

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15898 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15899 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15900 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15901 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15902 % U+00BF INVERTED QUESTION MARK; questiondown
15903 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15904 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15905 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15906 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15907 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15908 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15909 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15910 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15911 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15912 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15913 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15914 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15915 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15916 % U+00C6 LATIN CAPITAL LETTER AE; AE
15917 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15918 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15919 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15920 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15921 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15922 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15923 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15924 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15925 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15926 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15927 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15928 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15929 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15930 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15931 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15932 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15933 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15934 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15935 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15936 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15937 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15938 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15939 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15940 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15941 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15942 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15943 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15944 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15945 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15946 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15947 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5

15948 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15949 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
15950 % U+00D7 MULTIPLICATION SIGN; multiply
15951 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15952 %* \textmultiply -> \vartimes (stmaryrd)
15953 %* \textmultiply -> \MVMultiplication (marvosym)
15954 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15955 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15956 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15957 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15958 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15959 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15960 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15961 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15962 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15963 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
15964 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15965 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15966 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15967 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15968 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15969 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15970 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15971 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15972 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15973 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15974 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15975 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15976 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15977 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15978 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15979 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15980 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
15981 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15982 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15983 % U+00E6 LATIN SMALL LETTER AE; ae
15984 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15985 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15986 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15987 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15988 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15989 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15990 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15991 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15992 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15993 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15994 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
15995 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15996 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15997 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\354}% U+00EC

15998 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15999 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16000 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16001 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16002 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16003 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16004 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16005 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16006 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16007 % U+00F0 LATIN SMALL LETTER ETH; eth
16008 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16009 %* \dh -> \eth (wsuipa, phonetic)
16010 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16011 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16012 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16013 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16014 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16015 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16016 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16017 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16018 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16019 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16020 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16021 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16022 % U+00F7 DIVISION SIGN; divide
16023 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16024 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16025 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16026 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16027 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16028 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16029 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16030 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16031 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16032 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16033 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16034 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16035 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16036 % U+00FE LATIN SMALL LETTER THORN; thorn;
16037 % \th, \thorn (wasysym), \textthorn (tipa)
16038 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16039 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16040 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16041 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16042 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16043 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16044 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron

16045 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16046 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16047 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16048 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16049 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16050 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16051 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16052 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16053 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16054 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16055 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16056 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16057 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16058 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16059 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16060 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16061 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16062 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16063 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16064 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16065 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16066 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16067 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16068 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16069 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16070 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16071 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16072 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16073 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16074 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16075 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16076 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16077 % \textcrd (tipa)
16078 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16079 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16080 %* \textcrd -> \crossd (wsuipa)
16081 % An alternate glyph with the stroke through the bowl:
16082 %* \textcrd -> \textbard (tipa)
16083 %* \textcrd -> \bard (wsuipa)
16084 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16085 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16086 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16087 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16088 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16089 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16090 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16091 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16092 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16093 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116

16094 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16095 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16096 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16097 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16098 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16099 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16100 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16101 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16102 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16103 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16104 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16105 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16106 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16107 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16108 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16109 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16110 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16111 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16112 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16113 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16114 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16115 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16116 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16117 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16118 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16119 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16120 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16121 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16122 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16123 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16124 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16125 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16126 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16127 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16128 %* \texthbar -> \textcrh (tipa)
16129 %* \texthbar -> \crossh (wsuipa)
16130 %* \texthbar -> \planck (phonetic)
16131 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16132 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16133 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16134 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16135 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16136 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16137 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16138 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16139 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16140 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16141 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve

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16142 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16143 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16144 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16145 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16146 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16147 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16148 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16149 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16150 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16151 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16152 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16153 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16154 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16155 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16156 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16157 % U+0133 LATIN SMALL LIGATURE IJ; ij
16158 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16159 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16160 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16161 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16162 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16163 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16164 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16165 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16166 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16167 \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`.

```

16168 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16169 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16170 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16171 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16172 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16173 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16174 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16175 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16176 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16177 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16178 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16179 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16180 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16181 \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`.

16182 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
 cent
 16183 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16184 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16185 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16186 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16187 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16188 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16189 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16190 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16191 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16192 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16193 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16194 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 16195 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16196 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16197 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16198 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16199 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16200 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16201 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16202 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16203 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16204 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16205 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16206 % U+014B LATIN SMALL LETTER ENG; eng
 16207 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16208 %* \ng -> \eng (wsuipa)
 16209 %* \ng -> \engma (phonetic)
 16210 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16211 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16212 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16213 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16214 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16215 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16216 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16217 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16218 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
 cute, Ohungarumlaut
 16219 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16220 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16221 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16222 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16223 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16224 % U+0153 LATIN SMALL LIGATURE OE; oe
 16225 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16226 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute

16227 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16228 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16229 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16230 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16231 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16232 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16233 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16234 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16235 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16236 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16237 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16238 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16239 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16240 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16241 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16242 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16243 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16244 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16245 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16246 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16247 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16248 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16249 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16250 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16251 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16252 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16253 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16254 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
 cent
 16255 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16256 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16257 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 16258 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16259 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16260 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16261 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 16262 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 16263 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 16264 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 16265 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 16266 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 16267 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16268 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16269 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16270 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 16271 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 16272 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16273 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16274 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve

16275 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16276 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16277 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16278 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16279 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16280 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16281 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16282 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 16283 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16284 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 16285 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16286 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16287 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16288 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16289 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16290 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16291 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16292 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16293 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16294 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16295 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16296 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16297 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16298 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16299 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16300 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16301 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16302 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16303 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16304 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16305 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16306 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16307 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16308 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16309 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16310 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16311 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16312 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16313 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16314 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16315 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16316 %* \textcrb -> \crossb (wsuipa)
 16317 % An alternate glyph with the stroke through the bowl:
 16318 %* \textcrb -> \textbarb (tipa)
 16319 %* \textcrb -> \barb (wsuipa)
 16320 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-

netic)

16321 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181

16322 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)

16323 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188

16324 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)

16325 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A

16326 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed

16327 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E

16328 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E

16329 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

16330 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192

16331 %* \textflorin -> \Florin (marvosym)

16332 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)

16333 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195

16334 %* \texthvlig -> \hv (wsuipa)

16335 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)

16336 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198

16337 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)

16338 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199

16339 %* \texthtk -> \hausak (phonetic)

16340 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;

16341 % \textbarl (tipa), \barl (wsuipa)

16342 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A

16343 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/

16344 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;

16345 % \textcrlambda (tipa)

16346 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B

16347 %* \textcrlambda -> \crossnilambda (wsuipa)

16348 %* \textcrlambda -> \barlambd (phonetic)

16349 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)

16350 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)

16351 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;

16352 % \textnrleg (tipx)

16353 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E

16354 %* \textPUnrleg -> \textnrleg (tipx)

16355 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)

16356 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5

16357 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;

16358 % \textlhookt (tipa)

16359 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

16360 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)

16361 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD

16362 % U+01B9 LATIN SMALL LETTER EZH REVERSED/

16363 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)

16364 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9

16365 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)

16366 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB

16367 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16368 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16369 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16370 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16371 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16372 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16373 % \textpipe (tipa)
16374 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16375 %* \textpipe -> \textpipevar (tipx)
16376 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16377 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16378 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16379 %* \textdoublepipe -> \textdoublepipevar (tipx)
16380 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16381 % clickalveolar; \textdoublebarpipe (tipa)
16382 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16383 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16384 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16385 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16386 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16387 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16388 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16389 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16390 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16391 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16392 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16393 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16394 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16395 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16396 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16397 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16398 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16399 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16400 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16401 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16402 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16403 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16404 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16405 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16406 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16407 %* \textgslash -> \textcrg (tipa)
16408 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16409 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16410 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
16411 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16412 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16413 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16414 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón

16415 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16416 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16417 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16418 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16419 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16420 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16421 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16422 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16423 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16424 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16425 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16426 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16427 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16428 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16429 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16430 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16431 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16432 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16433 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16434 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16435 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16436 % *Oslashacute, Ostrokeacut
16437 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16438 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16439 % *oslashacute, ostrokeacute
16440 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16441 </puenc>
16442 <*puextra>
16443 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16444 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16445 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16446 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16447 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16448 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16449 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16450 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16451 </puextra>
16452 <*puenc>
16453 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16454 \DeclareTextCompositeCommand{\textinvertedbreve}{PU}{E}{\82\006}% U+0206
16455 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16456 \DeclareTextCompositeCommand{\textinvertedbreve}{PU}{e}{\82\007}% U+0207
16457 </puenc>
16458 <*puextra>
16459 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16460 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16461 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16462 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209

16463 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16464 </puextra>
16465 <*puenc>
16466 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; iinverted-
breve
16467 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16468 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16469 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16470 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\i}{\82\013}% U+020B
16471 </puenc>
16472 <*puextra>
16473 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16474 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16475 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16476 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16477 </puextra>
16478 <*puenc>
16479 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16480 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16481 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16482 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16483 </puenc>
16484 <*puextra>
16485 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16486 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16487 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16488 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16489 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16490 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16491 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16492 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16493 </puextra>
16494 <*puenc>
16495 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16496 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16497 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
16498 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16499 % U+021E LATIN CAPITAL LETTER H WITH CARON
16500 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16501 % U+021F LATIN SMALL LETTER H WITH CARON
16502 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16503 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16504 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16505 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16506 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225

16507 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16508 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16509 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16510 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16511 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16512 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16513 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16514 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16515 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16516 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16517 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16518 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16519 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16520 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16521 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16522 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16523 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16524 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16525 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16526 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16527 % U+0237 LATIN SMALL LETTER DOTLESS J
 16528 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16529 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16530 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16531 %* \textPUdblig -> \textdblig (tipx)
 16532 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16533 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16534 %* \textPUqplig -> \textqplig (tipx)
 16535 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16536 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16537 %* \textslashc -> \textcentoldstyle (textcomp)
 16538 % With bar instead of stroke:
 16539 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16540 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16541 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16542 %* \textturna -> \inva (wasysym)
 16543 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16544 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16545 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16546 %* \textscripta -> \vara (phonetic)
 16547 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16548 % \textturnscripta (tipa)
 16549 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16550 %* \textturnscripta -> \invscripta (wsuipa)
 16551 %* \textturnscripta -> \rotvara (phonetic)
 16552 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16553 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16554 %* \texthtb -> \hookb (wsuipa)

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16555 %* \texthtb -> \hausab (phonetic)
16556 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16557 % \textopeno (tipa), \openo (wasysym)
16558 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16559 %* \textopeno -> \varopeno (phonetic)
16560 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16561 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16562 %* \textctc -> \curlyc (wsuipa)
16563 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16564 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16565 %* \textrtaild -> \taild (wsuipa)
16566 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16567 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16568 %* \texthtd -> \hookd (wsuipa)
16569 %* \texthtd -> \hausad (phonetic)
16570 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16571 % \textreve (tipa), \reve (wsuipa)
16572 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16573 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16574 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16575 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16576 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16577 % \textrhookschwa (tipa)
16578 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16579 %* \textrhookschwa -> \er (wsuipa)
16580 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
      SILON; eopen;
16581 % \niepsilon (wsuipa)
16582 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16583 %* \textniepsilon -> \epsi (phonetic)
16584 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16585 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16586 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16587 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
      reversedhook;
16588 % \textrhookrevepsilon (tipa)
16589 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16590 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16591 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
      versedclosed;
16592 % \textcloserevepsilon (tipa)
16593 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16594 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16595 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
      lessstroke;
16596 % \textbardotlessj (tipa)
16597 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16598 %* \textbardotlessj -> \barj (phonetic)
16599 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16600 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260

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16601 %* \texthtg -> \hookg (wsuipa)
 16602 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16603 % \textscriptg (tipa), \scriptg (wsuipa)
 16604 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16605 %* \textscriptg -> \varg (phonetic)
 16606 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16607 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16608 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
 16609 % \ipagamma (wsuipa), \vod (phonetic)
 16610 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16611 %* \textipagamma -> \vod (pnonetic)
 16612 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16613 % \babygamma (wsuipa)
 16614 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16615 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16616 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16617 %* \textturnh -> \invh (wsuipa)
 16618 %* \textturnh -> \udesc (phonetic)
 16619 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16620 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16621 %* \texthth -> \hookh (wsuipa)
 16622 %* \texthth -> \voicedh (phonetic)
 16623 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16624 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16625 %* \texththeng -> \hookheng (wsuipa)
 16626 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16627 % \textbari (tipa), \bari (wsuipa)
 16628 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16629 %* \textbari -> \ibar (phonetic)
 16630 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16631 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16632 %* \textniiota -> \vari (phonetic)
 16633 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16634 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16635 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16636 % \textltilde (tipa)
 16637 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16638 %* \textltilde -> \tildel (wsuipa)
 16639 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16640 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16641 %* \textbeltl -> \latfric (wsuipa)
 16642 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16643 % \hookretroflex; \textrtaill (tipa)
 16644 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
 16645 %* \textrtaill -> \taill (wsuipa)
 16646 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
 16647 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
 16648 %* \textlyoghlig -> \lz (wsuipa)
 16649 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)

16650 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16651 %* \textturnm -> \invm (wsuipa)
16652 %* \textturnm -> \rotm (phonetic)
16653 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16654 % \textturnmrleg (tipa)
16655 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16656 %* \textturnmrleg -> \legm (wsuipa)
16657 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16658 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16659 %* \textltailm -> \labdentalnas (wsuipa)
16660 %* \textltailm -> \emgma (phonetic)
16661 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16662 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16663 %* \textltailn -> \nj (wsuipa)
16664 %* \textltailn -> \enya (phonetic)
16665 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16666 % nhookretroflex; \textrtailn (tipa)
16667 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16668 %* \textrtailn -> \tailn (wsuipa)
16669 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16670 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16671 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16672 % LATIN CAPITAL LETTER BARRED O; obarred;
16673 % \textbaro (tipa), \baro (wsuipa)
16674 % But \baro from stmaryrd is different!
16675 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16676 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16677 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16678 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16679 % \textcloseomega (tipa)
16680 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16681 %* \textcloseomega -> \closedniomega (wsuipa)
16682 %* \textcloseomega -> \varomega (phonetic)
16683 % U+0278 LATIN SMALL LETTER PHI; philatin; \niphi (wsuipa)
16684 \DeclareTextCommand{\textniphi}{PU}{\82\170}%* U+0278
16685 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16686 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16687 %* \textturnr -> \invr (wsuipa)
16688 %* \textturnr -> \rotr (phonetic)
16689 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16690 % rlonglegturned; \textturnlongleg (tipa)
16691 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16692 %* \textturnlongleg -> \invleg (wsuipa)
16693 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16694 % \textturnrrtail (tipa)
16695 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16696 %* \textturnrrtail -> \tailinvr (wsuipa)
16697 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-

glegr (tipa)

16698 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C

16699 %* \textlonglegr -> \legr (wsuipa)

16700 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoook; \textrtailr (tipa)

16701 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D

16702 %* \textrtailr -> \tailr (wsuipa)

16703 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;

16704 % \textfishhookr (tipa)

16705 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E

16706 %* \textfishhookr -> \flapr (wsuipa)

16707 %* \textfishhookr -> \flap (phonetic)

16708 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;

16709 % \textlhtlongi (tipa)

16710 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F

16711 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)

16712 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280

16713 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;

16714 % \textinvscr (tipa), \invscr (wsuipa)

16715 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281

16716 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)

16717 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282

16718 %* \textrtails -> \tails (wsuipa)

16719 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)

16720 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283

16721 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;

16722 % dotlessjstrokehook; \texthtbardotlessj (tipa)

16723 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284

16724 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;

16725 % \textvibyi (tipa)

16726 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285

16727 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)

16728 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286

16729 %* \textctesh -> \curlyesh (wsuipa)

16730 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)

16731 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287

16732 %* \textturnt -> \clickt (wsuipa)

16733 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; tretroflexhook;

16734 % \textrtailt (tipa)

16735 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288

16736 %* \textrtailt -> \tailt (wsuipa)

16737 % U+0289 LATIN SMALL LETTER U BAR; ubar;

16738 % \textbaru (tipa), \baru (wsuipa)

16739 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289

16740 %* \textbaru -> \ubar (phonetic)

16741 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)

16742 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A

16743 %* \textniupsilon -> \rotOmega (phonetic)

16744 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
 16745 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
 16746 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
 16747 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
 16748 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
 16749 %* \textturnv -> \invv (wsuipa)
 16750 %* \textturnv -> \pwedge (phonetic)
 16751 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
 16752 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
 16753 %* \textturnw -> \invw (wsuipa)
 16754 %* \textturnw -> \rotw (phonetic)
 16755 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
 16756 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
 16757 %* \textturny -> \invy (wsuipa)
 16758 %* \textturny -> \roty (phonetic)
 16759 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
 16760 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
 16761 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 16762 % \textrtailz (tipa)
 16763 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
 16764 %* \textrtailz -> \tailz (wsuipa)
 16765 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 16766 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 16767 %* \textctz -> \curlyz (wsuipa)
 16768 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 16769 % \textyogh (tipa), \yogh (wsuipa)
 16770 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 16771 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 16772 % ezhcurl; \textctyogh (tipa)
 16773 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 16774 %* \textctyogh -> \curlyyogh (wsuipa)
 16775 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 16776 % \textglotstop (tipa), \glotstop (wsuipa)
 16777 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 16778 %* \textglotstop -> \ejective (wsuipa)
 16779 %* \textglotstop -> \glottal (phonetic)
 16780 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 16781 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 16782 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 16783 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 16784 %* \textrevglotstop -> \reveject (wsuipa)
 16785 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 16786 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 16787 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
 16788 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
 16789 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
 16790 %* \textstretchc -> \clickc (wsuipa)

16791 %* \textstretchc -> \textstretchcvar (tipx)
16792 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16793 % \textbullseye (tipa)
16794 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16795 %* \textbullseye -> \clickb (wsuipa)
16796 %* \textbullseye -> \textObullseye (tipx)
16797 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16798 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16799 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16800 % \textcloseepsilon (tipa)
16801 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16802 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16803 % \texthtscg (tipa)
16804 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16805 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16806 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16807 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
16808 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16809 %* \textctj -> \textctjvar (tipx)
16810 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16811 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16812 %* \textturnk -> \textturnsck (tipx)
16813 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16814 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16815 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16816 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16817 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16818 % \textbarglotstop (tipa)
16819 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16820 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16821 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16822 % \textbarrevglotstop (tipa)
16823 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16824 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16825 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16826 %* \textdzlig -> \dz (wsupipa)
16827 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16828 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16829 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16830 % \textdctzlig (tipa)
16831 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16832 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16833 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16834 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
16835 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
16836 %* \texttshlig -> \tesh (wsuipa)

16837 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
16838 % \texttctclig (tipa)
16839 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
16840 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
16841 % \textlhtlongy (tipa)
16842 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
16843 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
16844 % \textvibyy (tipa)
16845 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16846 % U+02BD MODIFIER LETTER REVERSED COMMA;
16847 % commareversedmod, afii64937; \textrevapostrophe (tipa)
16848 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16849 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16850 % \textraiseglotstop (tipa)
16851 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
16852 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16853 % \textlptr (tipa)
16854 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16855 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16856 % \textrptr (tipa)
16857 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16858 % U+02C7 CARON; caron
16859 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
16860 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
16861 % \textprimstress (tipa)
16862 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
16863 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16864 % \textsecstress (tipa)
16865 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16866 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16867 % \textlengthmark (tipa)
16868 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16869 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
16870 % \texthalflength (tipa)
16871 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
16872 % U+02D8 BREVE; breve
16873 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16874 % U+02D9 DOT ABOVE; dotaccent
16875 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16876 % U+02DA RING ABOVE; ring
16877 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16878 % U+02DB OGONEK; ogonek
16879 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16880 % U+02DC SMALL TILDE; ilde, *tilde
16881 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16882 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16883 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD

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16884 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16885 % U+02F3 MODIFIER LETTER LOW RING
16886 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16887 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16888 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16889 % U+02F7 MODIFIER LETTER LOW TILDE
16890 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16891 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16892 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16893 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16894 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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51.2.8 Combining Diacritical Marks: U+0300 to U+036F

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16895 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16896 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16897 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16898 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16899 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
16900 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16901 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16902 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16903 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
16904 \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.

```

16905 \ifx\textBeta\@undefined \else
16906 \input{puenc-greekbasic.def}
16907 \fi
16908 </puenc>
16909 <*pugreek>
16910 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
16911 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
16912 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374
16913 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
16914 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
16915 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375
16916 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
16917 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
16918 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
16919 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
16920 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
16921 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
16922 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
16923 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
16924 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
    crontonos
16925 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C

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16926 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilon-tonos
 16927 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 16928 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 16929 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 16930 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 16931 % \iota-dieresistonos
 16932 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 16933 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 16934 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 16935 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 16936 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 16937 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 16938 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 16939 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
 16940 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 16941 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 16942 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 16943 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 16944 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 16945 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 16946 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 16947 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 16948 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 16949 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 16950 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 16951 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 16952 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 16953 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 16954 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 16955 % U+039C GREEK CAPITAL LETTER MU; Mu
 16956 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 16957 % U+039D GREEK CAPITAL LETTER NU; Nu
 16958 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 16959 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
 16960 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
 16961 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 16962 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 16963 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 16964 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
 16965 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 16966 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 16967 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
 16968 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
 16969 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 16970 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 16971 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
 16972 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
 16973 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
 16974 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6

16975 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16976 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16977 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16978 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16979 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16980 % \Omega (LaTeX)
16981 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16982 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16983 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16984 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16985 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
16986 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16987 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16988 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16989 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
16990 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16991 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
16992 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16993 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
16994 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16995 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16996 % AND TONOS; upsilondieresis
16997 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
16998 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16999 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17000 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17001 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17002 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17003 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17004 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17005 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17006 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17007 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17008 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17009 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17010 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17011 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17012 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17013 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17014 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17015 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17016 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17017 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17018 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17019 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17020 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17021 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17022 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17023 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD

17024 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17025 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17026 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17027 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17028 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17029 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17030 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17031 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17032 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17033 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17034 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17035 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17036 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17037 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17038 % U+03C5 GREEK SMALL LETTER UPSILON; epsilon; \epsilon (LaTeX)
17039 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17040 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17041 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17042 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17043 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17044 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17045 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17046 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17047 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17048 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17049 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\312}% U+03CA
17050 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
17051 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\313}% U+03CB
17052 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17053 \DeclareTextCompositeCommand{\'}{PU}{\textomicron}{\83\314}% U+03CC
17054 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17055 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17056 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
17057 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17058 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
17059 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
17060 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
17061 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
17062 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
17063 % U+03DA GREEK LETTER STIGMA; Stigmatreek
17064 \DeclareTextCommand{\textStigmatreek}{PU}{\83\332}% U+03DA
17065 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
17066 % U+03DB GREEK SMALL LETTER STIGMA
17067 \DeclareTextCommand{\textstigmatreek}{PU}{\83\333}% U+03DB
17068 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
17069 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17070 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17071 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
17072 % U+03DD GREEK SMALL LETTER DIGAMMA

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17073 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17074 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD
17075 %* \textdigammagreek -> \digamma (AmS)
17076 % U+03DE GREEK LETTER KOPPA; Koppagreek
17077 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
17078 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17079 % U+03DF GREEK SMALL LETTER KOPPA
17080 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
17081 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17082 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17083 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17084 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
17085 % U+03E1 GREEK SMALL LETTER SAMPI
17086 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17087 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
17088 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17089 % \backepsilon (AmS)
17090 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
17091 \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.

```

17092 (*puenc)
17093 \ifx\CYRDZE\@undefined \else
17094 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17095 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17096 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17097 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17098 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17099 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17100 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17101 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17102 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17103 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
17104 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17105 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17106 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17107 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17108 % Icyrrilic, *afii10055
17109 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17110 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
17111 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17112 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17113 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17114 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17115 % U+0409 CYRILLIC CAPITAL LETTER LJJE; Ljecyrillic, *afii10058
17116 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409

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17117 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17118 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17119 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17120 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17121 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17122 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17123 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17124 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17125 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17126 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17127 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17128 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17129 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17130 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17131 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17132 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17133 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17134 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17135 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17136 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17137 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17138 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17139 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17140 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17141 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17142 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17143 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17144 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17145 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17146 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17147 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17148 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Ishortcyrillic, *afii10027
17149 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17150 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17151 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17152 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17153 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17154 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17155 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17156 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17157 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17158 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17159 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17160 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17161 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17162 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17163 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17164 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17165 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17166 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421

17167 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17168 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17169 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17170 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17171 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17172 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17173 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17174 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17175 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17176 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17177 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17178 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17179 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17180 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17181 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17182 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17183 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17184 % Hardsigncyrillic, *afii10044
17185 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17186 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17187 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17188 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17189 % Softsigncyrillic, *afii10046
17190 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17191 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17192 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17193 % U+042E CYRILLIC CAPITAL LETTER YU; IUCyrillic, *afii10048
17194 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17195 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17196 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17197 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17198 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17199 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17200 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17201 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17202 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17203 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17204 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17205 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17206 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17207 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17208 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17209 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17210 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17211 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17212 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17213 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17214 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17215 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17216 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439

17217 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17218 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17219 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17220 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17221 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
17222 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17223 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17224 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17225 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17226 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17227 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17228 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17229 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17230 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17231 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17232 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17233 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17234 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17235 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17236 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17237 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17238 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17239 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17240 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17241 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17242 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17243 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17244 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17245 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17246 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17247 \DeclareTextCommand{\cyrrsh}{PU}{\84\110}% U+0448
17248 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17249 \DeclareTextCommand{\cyrrshch}{PU}{\84\111}% U+0449
17250 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyril-
lic
17251 \DeclareTextCommand{\cyrrhrdsn}{PU}{\84\112}% U+044A
17252 %* \cyrrhrdsn -> \hardsign (tipa)
17253 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17254 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
17255 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17256 \DeclareTextCommand{\cyrrsftsn}{PU}{\84\114}% U+044C
17257 %* \cyrrsftsn -> \softsign (tipa)
17258 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17259 \DeclareTextCommand{\cyrrerev}{PU}{\84\115}% U+044D
17260 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17261 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17262 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17263 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17264 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17265 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450

17266 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17267 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17268 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\121}% U+0451
17269 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17270 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17271 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17272 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17273 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17274 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17275 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17276 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17277 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17278 % *afii10103, icyrillic
17279 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17280 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17281 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17282 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17283 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17284 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17285 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17286 \DeclareTextCommand{\cylrje}{PU}{\84\131}% U+0459
17287 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17288 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17289 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17290 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17291 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17292 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17293 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17294 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17295 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17296 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17297 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17298 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17299 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17300 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17301 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17302 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17303 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17304 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17305 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17306 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17307 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17308 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17309 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17310 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17311 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17312 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17313 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17314 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17315 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467

17316 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17317 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17318 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
 otifiedcyrillic
 17319 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17320 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17321 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17322 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17323 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 17324 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17325 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17326 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 17327 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17328 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17329 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17330 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17331 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17332 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17333 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17334 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17335 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17336 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17337 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17338 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17339 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17340 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17341 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17342 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17343 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17344 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17345 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17346 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17347 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17348 % GRAVE ACCENT; izhitsadblgravecyrillic
 17349 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17350 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17351 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17352 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17353 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17354 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 17355 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17356 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17357 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17358 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic
 17359 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C

17360 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 17361 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17362 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17363 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17364 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17365 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17366 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17367 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17368 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17369 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17370 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17371 \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; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17372 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17373 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17374 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17375 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17376 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17377 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17378 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17379 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17380 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17381 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17382 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17383 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17384 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17385 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17386 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17387 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17388 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17389 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17390 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17391 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17392 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17393 % Ghemiddlehookcyrillic

17394 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17395 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17396 % ghemiddlehookcyrillic
 17397 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17398 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17399 % Zhedescendercyrillic
 17400 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17401 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17402 % zhedescendercyrillic
 17403 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17404 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17405 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17406 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17407 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17408 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17409 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17410 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17411 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17412 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17413 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17414 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17415 % Kaverticastrokecyrillic
 17416 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17417 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17418 % kaverticastrokecyrillic
 17419 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17420 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17421 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17422 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17423 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17424 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17425 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17426 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17427 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17428 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 17429 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17430 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 17431 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17432 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17433 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17434 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17435 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17436 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic

17437 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17438 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
17439 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17440 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
17441 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17442 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17443 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17444 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
17445 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17446 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17447 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
17448 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
17449 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
17450 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
17451 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
17452 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
17453 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
17454 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17455 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17456 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17457 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17458 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
17459 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17460 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
17461 \DeclareTextCommand{\cyr y hcrs}{PU}{\84\261}% U+04B1
17462 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesccendercyrillic
17463 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17464 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17465 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17466 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17467 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17468 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17469 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17470 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17471 % Chedescendercyrillic
17472 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17473 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17474 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17475 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;

17476 % Cheverticalstrokecyrillic
17477 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17478 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17479 % cheverticalstrokecyrillic
17480 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17481 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17482 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17483 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17484 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17485 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
17486 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17487 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
lic
17488 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17489 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
17490 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17491 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17492 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
17493 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17494 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17495 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17496 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17497 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17498 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17499 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17500 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17501 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17502 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17503 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17504 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17505 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17506 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17507 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17508 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
17509 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17510 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17511 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17512 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17513 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
siancyrillic
17514 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17515 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
17516 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17517 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17518 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17519 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL

17520 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17521 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17522 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17523 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17524 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17525 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrl-
 lic
 17526 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17527 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrlilic
 17528 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17529 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17530 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17531 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17532 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17533 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17534 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17535 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17536 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17537 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17538 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17539 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17540 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 17541 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17542 % Schwadiesiscyrlilic
 17543 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17544 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17545 % schwadiesiscyrlilic
 17546 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
 17547 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrlilic
 17548 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17549 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrlilic
 17550 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17551 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrlilic
 17552 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 17553 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrl-
 lic
 17554 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 17555 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrlilic
 17556 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17557 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrl-
 lic
 17558 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17559 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrlilic
 17560 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2

17561 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17562 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
17563 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17564 \DeclareTextCompositeCommand{\"} {PU}{\CYRI}{\84\344}% U+04E4
17565 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17566 \DeclareTextCompositeCommand{\"} {PU}{\cyri}{\84\345}% U+04E5
17567 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17568 \DeclareTextCompositeCommand{\"} {PU}{\CYRO}{\84\346}% U+04E6
17569 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17570 \DeclareTextCompositeCommand{\"} {PU}{\cyro}{\84\347}% U+04E7
17571 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17572 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17573 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17574 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17575 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17576 % Obarreddieresiscyrillic
17577 \DeclareTextCompositeCommand{\"} {PU}{\CYROTLD}{\84\352}% U+04EA
17578 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17579 % obarreddieresiscyrillic
17580 \DeclareTextCompositeCommand{\"} {PU}{\cyrotld}{\84\353}% U+04EB
17581 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17582 \DeclareTextCompositeCommand{\"} {PU}{\CYREREV}{\84\354}% U+04EC
17583 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17584 \DeclareTextCompositeCommand{\"} {PU}{\cyreref}{\84\355}% U+04ED
17585 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17586 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
17587 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17588 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
17589 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17590 \DeclareTextCompositeCommand{\"} {PU}{\CYRU}{\84\360}% U+04F0
17591 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17592 \DeclareTextCompositeCommand{\"} {PU}{\cyru}{\84\361}% U+04F1
17593 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic
17594 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
17595 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
garumlautcyrillic
17596 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
17597 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17598 \DeclareTextCompositeCommand{\"} {PU}{\CYRCH}{\84\364}% U+04F4
17599 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis-
cyrillic
17600 \DeclareTextCompositeCommand{\"} {PU}{\cyrch}{\84\365}% U+04F5
17601 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17602 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17603 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17604 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

17605 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17606 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17607 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17608 \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
17609 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17610 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17611 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17612 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
17613 \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

17614 \ifx\hebdalet\@undefined\else
17615 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17616 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17617 % U+05D0 HEBREW LETTER ALEF
17618 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17619 % U+05D1 HEBREW LETTER BET
17620 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17621 % U+05D2 HEBREW LETTER GIMEL
17622 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17623 % U+05D3 HEBREW LETTER DALET
17624 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17625 % U+05D4 HEBREW LETTER HE
17626 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17627 % U+05D5 HEBREW LETTER VAV
17628 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17629 % U+05D6 HEBREW LETTER ZAYIN
17630 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17631 % U+05D7 HEBREW LETTER HET
17632 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
17633 % U+05D8 HEBREW LETTER TET
17634 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17635 % U+05D9 HEBREW LETTER YOD
17636 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17637 % U+05DA HEBREW LETTER FINAL KAF
17638 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17639 % U+05DB HEBREW LETTER KAF

17640 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
 17641 % U+05DC HEBREW LETTER LAMED
 17642 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17643 % U+05DD HEBREW LETTER FINAL MEM
 17644 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17645 % U+05DE HEBREW LETTER MEM
 17646 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17647 % U+05DF HEBREW LETTER FINAL NUN
 17648 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17649 % U+05E0 HEBREW LETTER NUN
 17650 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17651 % U+05E1 HEBREW LETTER SAMEKH
 17652 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17653 % U+05E2 HEBREW LETTER AYIN
 17654 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17655 % U+05E3 HEBREW LETTER FINAL PE
 17656 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17657 % U+05E4 HEBREW LETTER PE
 17658 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17659 % U+05E5 HEBREW LETTER FINAL TSADI
 17660 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17661 % U+05E6 HEBREW LETTER TSADI
 17662 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17663 % U+05E7 HEBREW LETTER QOF
 17664 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17665 % U+05E8 HEBREW LETTER RESH
 17666 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17667 % U+05E9 HEBREW LETTER SHIN
 17668 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17669 %* \hebshin -> \hebsin (he8)
 17670 % U+05EA HEBREW LETTER TAV
 17671 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17672 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17673 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17674 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17675 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17676 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17677 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17678 \fi

51.2.12 Thai: U+0E00 to U+0E7F

17679 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17680 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17681 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsc (tipa)
 17682 \DeclareTextCommand{\textsc}{PU}{\9035\000}% U+1D00
 17683 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17684 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05

17685 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
17686 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
17687 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
17688 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
17689 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textsck (tipx)
17690 \DeclareTextCommand{\textPUscj}{PU}{\9035\013}% U+1D0B
17691 %* \textPUscj -> \textsck (tipx)
17692 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
17693 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
17694 %* \textPUscm -> \textscm (tipx)
17695 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
17696 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
17697 %* \textPUscp -> \textscp (tipx)
17698 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
17699 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
17700 %* \textPUrevscr -> \textrevscr (tipx)
17701 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
17702 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
17703 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
17704 \DeclareTextCommand{\textiiinferior}{PU}{\9035\142}%* U+1D62
17705 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
17706 \DeclareTextCommand{\textriinferior}{PU}{\9035\143}%* U+1D63
17707 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
17708 \DeclareTextCommand{\textuiinferior}{PU}{\9035\144}%* U+1D64
17709 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
17710 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
17711 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
17712 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
17713 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
17714 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
17715 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
17716 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
17717 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
17718 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
17719 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
17720 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
17721 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
17722 % \barsci (wsuipa)
17723 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
17724 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17725 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
17726 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
17727 % \barscu (wsuipa)
17728 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17729 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
trhooka (tipx)
17730 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
17731 %* \textPURhooka -> \textrhooka (tipx)

17732 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
taild (tipa)
17733 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
17734 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
trhooke (tipx)
17735 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
17736 %* \textPURhooke -> \textrhooke (tipx)
17737 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
17738 % \textrhookepsilon (tipx)
17739 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
17740 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
17741 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
17742 % \textrhookopeno (tipx)
17743 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
17744 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17745 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
17746 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
17747 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
17748 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
17749 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
17750 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
17751 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
17752 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
17753 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
17754 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
17755 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
17756 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
17757 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
17758 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
17759 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
17760 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
17761 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17762 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17763 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17764 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17765 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17766 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17767 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17768 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17769 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17770 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17771 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17772 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17773 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17774 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17775 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17776 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17777 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-

cumflexbelow
 17778 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 17779 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
 cumflexbelow
 17780 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
 17781 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
 17782 % E macrongrave
 17783 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
 17784 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
 17785 % e macrongrave
 17786 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
 17787 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
 17788 % E macronacute
 17789 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
 17790 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
 17791 % e macronacute
 17792 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
 17793 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
 cumflexbelow
 17794 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
 17795 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
 cumflexbelow
 17796 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
 17797 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
 17798 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
 17799 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
 17800 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
 17801 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 17802 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 17803 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 17804 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 17805 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 17806 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 17807 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 17808 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 17809 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 17810 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 17811 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 17812 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 17813 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
 17814 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
 17815 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
 17816 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
 17817 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 17818 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 17819 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 17820 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 17821 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 17822 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 17823 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla

17824 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17825 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17826 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17827 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17828 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17829 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17830 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17831 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17832 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17833 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17834 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17835 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17836 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17837 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17838 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17839 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17840 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17841 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17842 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17843 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17844 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17845 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17846 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17847 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17848 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17849 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17850 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17851 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17852 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17853 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17854 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17855 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17856 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17857 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17858 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17859 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17860 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17861 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17862 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17863 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17864 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17865 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17866 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17867 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17868 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17869 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17870 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17871 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent

17872 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17873 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17874 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17875 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17876 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17877 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17878 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17879 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17880 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17881 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17882 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17883 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17884 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17885 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17886 % Omacrongrave
17887 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17888 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17889 % omacrongrave
17890 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17891 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17892 % Omacronacute
17893 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17894 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17895 % omacronacute
17896 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17897 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17898 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17899 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17900 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17901 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17902 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17903 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17904 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17905 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17906 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17907 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17908 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17909 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17910 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17911 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17912 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17913 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17914 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17915 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17916 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17917 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17918 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17919 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent

17920 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17921 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17922 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17923 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17924 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17925 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17926 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17927 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17928 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17929 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17930 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17931 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17932 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17933 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17934 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17935 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17936 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17937 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17938 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17939 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
17940 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17941 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17942 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17943 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udieresis-
below
17944 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17945 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17946 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17947 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17948 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17949 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17950 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17951 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17952 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17953 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17954 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17955 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17956 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17957 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17958 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17959 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17960 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17961 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17962 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17963 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave

17964 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17965 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17966 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17967 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17968 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17969 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17970 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17971 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17972 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17973 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17974 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17975 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17976 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17977 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17978 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17979 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17980 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17981 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17982 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17983 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17984 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17985 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17986 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17987 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17988 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17989 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17990 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17991 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17992 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17993 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17994 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17995 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17996 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17997 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17998 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17999 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18000 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18001 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18002 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18003 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18004 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18005 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18006 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18007 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18008 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18009 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18010 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18011 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18012 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18013 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-

taccent

18014 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
18015 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18016 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18017 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
18018 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
18019 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
18020 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
18021 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
18022 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
18023 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
18024 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
18025 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18026 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18027 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18028 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18029 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18030 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18031 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18032 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
18033 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
18034 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
18035 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
18036 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
18037 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
18038 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
18039 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
18040 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
18041 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
18042 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
18043 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
18044 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
18045 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
18046 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
18047 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
18048 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
18049 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
18050 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18051 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
18052 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
18053 % U+2013 EN DASH; endash
18054 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
18055 % U+2014 EM DASH; emdash
18056 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
18057 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
18058 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
18059 %* \textbardbl -> \textdoublevertline (tipa)
18060 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft

18061 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
18062 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
18063 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
18064 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
18065 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
18066 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
18067 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
18068 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
18069 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
18070 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
18071 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
18072 % U+2020 DAGGER; dagger
18073 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
18074 %* \textdagger -> \dag (LaTeX)
18075 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
18076 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
18077 %* \textdaggerdbl -> \ddagger (LaTeX)
18078 %* \textdaggerdbl -> \ddag (LaTeX)
18079 % U+2022 BULLET; bullet
18080 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
18081 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
18082 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
18083 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
18084 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
18085 %* \textellipsis -> \mathellipsis
18086 % U+2030 PER MILLE SIGN; perthousand
18087 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
18088 % U+2031 PER TEN THOUSAND SIGN
18089 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
18090 % U+2032 PRIME; minute; \prime (MnSymbol)
18091 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
18092 % U+2033 DOUBLE PRIME; \second (mathabx)
18093 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
18094 % U+2034 TRIPLE PRIME; \third (mathabx)
18095 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
18096 % U+2035 REVERSED PRIME; \backprime (AmS)
18097 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
18098 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
18099 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
18100 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
inglright
18101 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
18102 % U+203B REFERENCE MARK; referencemark
18103 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
18104 % U+203D INTERROBANG
18105 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
18106 % U+2044 FRACTION SLASH; fraction
18107 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
18108 % U+2045 LEFT SQUARE BRACKET WITH QUILL

18109 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18110 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18111 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18112 % U+2052 COMMERCIAL MINUS SIGN
 18113 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18114 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18115 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18116 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18117 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18118 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18119 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18120 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18121 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18122 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18123 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18124 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18125 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18126 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18127 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18128 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18129 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18130 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18131 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18132 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18133 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18134 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18135 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18136 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18137 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18138 % U+207B SUPERSCRIPT MINUS
 18139 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18140 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18141 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18142 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18143 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18144 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18145 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18146 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18147 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18148 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18149 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18150 % U+2081 SUBSCRIPT ONE; oneinferior
 18151 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18152 % U+2082 SUBSCRIPT TWO; twoinferior
 18153 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18154 % U+2083 SUBSCRIPT THREE; threeinferior
 18155 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18156 % U+2084 SUBSCRIPT FOUR; fourinferior

18157 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18158 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18159 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18160 % U+2086 SUBSCRIPT SIX; sixinferior
 18161 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18162 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18163 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18164 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18165 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18166 % U+2089 SUBSCRIPT NINE; nineinferior
 18167 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18168 % U+208A SUBSCRIPT PLUS SIGN
 18169 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18170 % U+208B SUBSCRIPT MINUS
 18171 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18172 % U+208C SUBSCRIPT EQUALS SIGN
 18173 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18174 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18175 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18176 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18177 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18178 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18179 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18180 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18181 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18182 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18183 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18184 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18185 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18186 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18187 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18188 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18189 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18190 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18191 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18192 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18193 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18194 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18195 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18196 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18197 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18198 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18199 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18200 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18201 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18202 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18203 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18204 % U+20A1 COLON SIGN; *colonmonetary, colonsign

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18205 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
18206 % U+20A4 LIRA SIGN; afii08941, *lira
18207 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
18208 % U+20A6 NAIRA SIGN
18209 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
18210 % U+20A7 PESETA SIGN; peseta
18211 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
18212 % U+20A9 WON SIGN; won
18213 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
18214 % U+20AB DONG SIGN; dong
18215 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
18216 % U+20AC EURO SIGN; *Euro, euro
18217 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
18218 %* \texteuro -> \EurDig (marvosym)
18219 %* \texteuro -> \EURdig (marvosym)
18220 %* \texteuro -> \EurHv (marvosym)
18221 %* \texteuro -> \EURhv (marvosym)
18222 %* \texteuro -> \EurCr (marvosym)
18223 %* \texteuro -> \EURcr (marvosym)
18224 %* \texteuro -> \EurTm (marvosym)
18225 %* \texteuro -> \EURtm (marvosym)
18226 %* \texteuro -> \Eur (marvosym)
18227 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
18228 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
18229 %* \textDeleatur -> \Denarius (marvosym)
18230 % U+20B1 PESO SIGN
18231 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
18232 % U+20B2 GUARANI SIGN
18233 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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51.2.19 Letterlike Symbols: U+2100 to U+214F

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18234 % U+2103 DEGREE CELSIUS; centigrade
18235 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
18236 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
18237 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
18238 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
18239 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
18240 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
18241 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
18242 % U+2116 NUMERO SIGN; *afii61352, numero
18243 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
18244 % U+2117 SOUND RECORDING COPYRIGHT
18245 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
18246 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
18247 % weierstrass; \wp (LaTeX)
18248 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
18249 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
18250 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
18251 % U+211E PRESCRIPTION TAKE; prescription

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18252 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18253 % U+2120 SERVICE MARK
 18254 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18255 % U+2122 TRADE MARK SIGN; trademark
 18256 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18257 % U+2126 OHM SIGN; Ohm, Omega
 18258 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18259 % U+2127 INVERTED OHM SIGN
 18260 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18261 %* \textmho -> \agemO (wasysym)
 18262 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18263 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18264 % U+212B ANGSTROM SIGN; angstrom
 18265 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18266 % U+212E ESTIMATED SYMBOL; estimated
 18267 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18268 %* \textestimated -> \EstimatedSign (marvosym)
 18269 %* \textestimated -> \Ecommerce (marvosym)
 18270 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18271 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18272 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18273 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18274 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18275 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18276 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18277 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18278 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18279 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18280 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18281 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18282 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18283 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18284 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18285 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18286 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18287 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18288 % U+2150 VULGAR FRACTION ONE SEVENTH
 18289 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18290 % U+2151 VULGAR FRACTION ONE NINTH
 18291 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18292 % U+2152 VULGAR FRACTION ONE TENTH
 18293 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18294 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18295 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18296 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18297 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18298 % U+2155 VULGAR FRACTION ONE FIFTH
 18299 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155

18300 % U+2156 VULGAR FRACTION TWO FIFTHS
 18301 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18302 % U+2157 VULGAR FRACTION THREE FIFTHS
 18303 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157
 18304 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18305 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18306 % U+2159 VULGAR FRACTION ONE SIXTH
 18307 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18308 % U+215A VULGAR FRACTION FIVE SIXTHS
 18309 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18310 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18311 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18312 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18313 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18314 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18315 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18316 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18317 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18318 % U+2184 LATIN SMALL LETTER REVERSED C
 18319 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18320 % U+2189 VULGAR FRACTION ZERO THIRDS
 18321 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18322 % U+2190 LEFTWARDS ARROW; arrowleft
 18323 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18324 % U+2191 UPWARDS ARROW; arrowup
 18325 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18326 % U+2192 RIGHTWARDS ARROW; arrowright
 18327 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18328 %* \textrightarrow -> \MVRightArrow (marvosym)
 18329 %* \textrightarrow -> \MVRightarrow (marvosym)
 18330 % U+2193 DOWNWARDS ARROW; arrowdown
 18331 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18332 %* \textdownarrow -> \MVArrowDown (marvosym)
 18333 %* \textdownarrow -> \Force (marvosym)
 18334 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18335 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18336 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18337 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18338 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18339 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18340 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18341 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18342 %* \textnearrow -> \textglobe (tipa)
 18343 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18344 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18345 %* \textsearrow -> \textglobfall (tipa)
 18346 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18347 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199

18348 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18349 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18350 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightharpoonup (AmS)
18351 \DeclareTextCommand{\textnrightharpoonup}{PU}{\9041\233}%* U+219B
18352 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18353 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18354 % \twoheadleftarrow (txfonts/pxfonts)
18355 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18356 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18357 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18358 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18359 % \twoheadrightarrow (AmS)
18360 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18361 % \twoheadrightarrow (txfonts/pxfonts)
18362 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18363 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheadrightarrow (Mn-
Symbol)
18364 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\241}%* U+21A1
18365 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18366 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18367 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18368 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18369 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18370 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18371 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18372 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18373 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18374 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18375 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18376 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18377 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18378 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18379 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharpoonup (AmS)
18380 \DeclareTextCommand{\textleftrightharpoonup}{PU}{\9041\256}%* U+21AE
18381 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18382 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18383 %* \textlightning -> \Lightning (marvosym)
18384 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18385 % \dls (mathabx)
18386 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18387 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18388 % \curvearrowleft (AmS)
18389 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18390 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18391 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18392 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
18393 % \leftharpoonup (LaTeX)
18394 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18395 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;

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18396 % \leftharpoondown (LaTeX)
18397 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18398 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18399 % \upharpoonright (AmS)
18400 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18401 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18402 % \upharpoonleft (AmS)
18403 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18404 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18405 % \rightharpoonup (LaTeX)
18406 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18407 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18408 % \rightharpoondown (LaTeX)
18409 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18410 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18411 % \downharpoonright (AmS)
18412 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18413 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18414 % \downharpoonleft (AmS)
18415 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18416 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18417 % \arrowrightoverleft; \rightleftarrows (MnSymbol)
18418 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18419 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18420 % \updownarrows (MnSymbol)
18421 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18422 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18423 % \leftrightarrows (AmS)
18424 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18425 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18426 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18427 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18428 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18429 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18430 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18431 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18432 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18433 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18434 % \leftrightharpoons (AmS);
18435 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18436 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18437 % \rightleftharpoons (LaTeX, AmS)
18438 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18439 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18440 % \nLeftarrow (AmS)
18441 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD

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18442 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
18443 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18444 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
18445 % \nRrightarrow (AmS)
18446 \DeclareTextCommand{\textnRrightarrow}{PU}{\9041\317}%* U+21CF
18447 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18448 % \Leftarrow (LaTeX)
18449 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18450 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18451 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18452 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18453 % \Rrightarrow (LaTeX)
18454 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18455 %* \textRrightarrow -> \Conclusion (marvosym)
18456 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18457 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18458 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18459 % \Leftrightarrow (LaTeX)
18460 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18461 %* \textLeftrightarrow -> \Equivalence (marvosym)
18462 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18463 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18464 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18465 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18466 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18467 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18468 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18469 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18470 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18471 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18472 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18473 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18474 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18475 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18476 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18477 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18478 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18479 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18480 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18481 % \dashleftarrow (AmS)
18482 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18483 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18484 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18485 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18486 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)

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18487 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18488 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18489 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18490 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18491 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18492 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18493 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18494 % \downuparrows (MnSymbol)
18495 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18496 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18497 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18498 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18499 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18500 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtrian-
gle (stmaryrd)
18501 \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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18502 % U+2200 FOR ALL; forall; \forall (LaTeX)
18503 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18504 % U+2201 COMPLEMENT; \complement (AmS)
18505 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18506 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18507 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18508 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18509 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18510 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18511 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18512 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18513 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18514 %* \textemptyset -> \varnothing (AmS)
18515 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18516 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18517 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18518 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18519 % U+2208 ELEMENT OF; element; \in (LaTeX)
18520 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18521 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18522 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18523 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18524 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18525 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18526 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18527 %* \textni -> \owns (mathabx)
18528 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18529 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18530 %* \textnotowner -> \notni (txfonts/pxfonts)
18531 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18532 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D

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18533 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18534 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18535 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18536 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18537 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18538 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18539 % U+2212 MINUS SIGN; minus
18540 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18541 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18542 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18543 % U+2214 DOT PLUS; \dotplus (AmS)
18544 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18545 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18546 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18547 % \DividesNot (marvosym)
18548 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18549 % U+2216 SET MINUS; \setminus (LaTeX)
18550 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18551 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18552 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18553 % U+2218 RING OPERATOR; \circ (LaTeX)
18554 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18555 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18556 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18557 % U+221A SQUARE ROOT; radical
18558 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18559 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18560 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18561 %* \textpropto -> \varprop (wasysym)
18562 % U+221E INFINITY; infinity; \infty (LaTeX)
18563 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18564 % U+2220 ANGLE; angle; \angle (LaTeX)
18565 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18566 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18567 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18568 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18569 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18570 %* \textsphericalangle -> \varangle (wasysym)
18571 %* \textsphericalangle -> \Anglesign (marvosym)
18572 %* \textsphericalangle -> \AngleSign (marvosym)
18573 % U+2223 DIVIDES; divides; \mid (LaTeX)
18574 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18575 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18576 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18577 %* \textnmid -> \notdivides (mathabx)
18578 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18579 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18580 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18581 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18582 %* \textnparallel -> nUpdownline (MnSymbol)

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18583 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18584 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18585 % \owedge (stmaryrd)
18586 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18587 %* \textowedge -> \varowedge (stmaryrd)
18588 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18589 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18590 % \ovee (stmaryrd)
18591 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18592 %* \textovee -> \varovee (stmaryrd)
18593 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18594 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18595 % U+222A UNION; union; \cup (LaTeX)
18596 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18597 % U+222B INTEGRAL; integral; \int (LaTeX)
18598 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18599 %* \textint -> \varint (wasysym)
18600 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18601 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18602 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18603 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18604 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18605 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18606 %* \textoint -> \varoint (wasysym)
18607 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18608 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18609 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18610 % \ointclockwise (txfonts/pxfonts)
18611 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18612 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18613 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18614 % U+2234 THEREFORE; therefore; \therefore (AmS)
18615 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18616 %* \texttherefore -> uptherefore (MnSymbol)
18617 % U+2235 BECAUSE; because; \because (AmS)
18618 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18619 %* \textbecause -> \downtherefore (MnSymbol)
18620 % U+2236 RATIO; \vdotdot (MnSymbol)
18621 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18622 % U+2237 PROPORTION; \squaredots (MnSymbol)
18623 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18624 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18625 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18626 %* \textdotminus -> \textdotdiv (mathabx)
18627 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18628 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18629 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18630 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18631 %* \textsim -> \AC (wasysym)

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18632 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18633 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18634 % \backsim (txfonts/pxfonts)
18635 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18636 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18637 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18638 %* \textwr -> \wreath (MnSymbol)
18639 % U+2241 NOT TILDE; \nsim (AmS)
18640 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18641 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18642 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18643 % \neqsim (MnSymbol)
18644 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18645 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
18646 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18647 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18648 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18649 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18650 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18651 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18652 % \ncong (AmS)
18653 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18654 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18655 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18656 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18657 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18658 %* \textnapprox -> \thickapprox (txfonts/pxfonts)
18659 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18660 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18661 % \napproxeq (txfonts/pxfonts)
18662 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18663 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18664 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18665 %* \texttriplesim -> \VHF (wasysym)
18666 % \ntriplesim (MnSymbol)
18667 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18668 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18669 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18670 % \nbackcong (MnSymbol)
18671 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18672 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18673 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18674 % \nasymp (txfonts/pxfonts)
18675 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18676 %* \textnasymp -> \notasympt (mathabx)
18677 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18678 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18679 % \nBumpeq (txfonts/pxfonts)
18680 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338

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18681 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18682 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18683 % \nbumpeq (txfonts/pxfonts)
18684 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18685 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18686 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18687 % \ndoteq (MnSymbol)
18688 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18689 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18690 % \doteqdot (AmS)
18691 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18692 %* \textdoteqdot -> \Doteq (MnSymbol)
18693 % \nDoteq (MnSymbol)
18694 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18695 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18696 % \fallingdotseq (AmS)
18697 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18698 % \nfallingdotseq (MnSymbol)
18699 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18700 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18701 % \risingdotseq (AmS)
18702 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18703 % \nrisingdotseq (MnSymbol)
18704 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18705 % U+2254 COLON EQUALS; \colonequals (colonequals)
18706 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18707 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18708 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18709 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18710 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18711 % \neqcirc (MnSymbol)
18712 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18713 % U+2257 RING EQUAL TO; \circeq (AmS)
18714 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18715 % \ncirceq (MnSymbol)
18716 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18717 % U+2259 ESTIMATES; \hateq (MnSymbol)
18718 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18719 %* \texthateq -> \corresponds (mathabx)
18720 %* \texthateq -> \Corresponds (marvosym)
18721 % \nhateq (MnSymbol)
18722 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18723 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18724 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18725 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18726 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18727 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18728 %* \textneq -> \nequal (MnSymbol)

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18729 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18730 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18731 %* \textequiv -> \Congruent (marvosym)
18732 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
18733 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18734 %* \textnequiv -> \NotCongruent (marvosym)
18735 %* \textnequiv -> \notequiv (mathabx)
18736 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18737 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18738 \DeclareTextCommand{\texttle}{PU}{\9042\144}%* U+2264
18739 %* \textleq -> \LessOrEqual (marvosym)
18740 % U+2265 GREATER-THAN OR EQUAL TO; greaterqual;
18741 % \ge (LaTeX), \geq (LaTeX)
18742 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18743 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18744 %* \textgeq -> \LargerOrEqual (marvosym)
18745 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
18746 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18747 % \nleqq (txfonts/pxfonts)
18748 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18749 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
18750 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18751 % \ngeqq (txfonts/pxfonts)
18752 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18753 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18754 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18755 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18756 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18757 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18758 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18759 % \nll (txfonts/pxfonts)
18760 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18761 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18762 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18763 % \ngg (txfonts/pxfonts)
18764 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18765 % U+226C BETWEEN; \between (AmS)
18766 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18767 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18768 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18769 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18770 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18771 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18772 % \nleq (AmS)
18773 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18774 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18775 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18776 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18777 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272

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18778 %* \textlessssim -> \apprle (wasysym)
18779 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18780 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18781 %* \textgtrsim -> \apprge (wasysym)
18782 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-fonts/pxfonts)
18783 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18784 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-fonts/pxfonts)
18785 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18786 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18787 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18788 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18789 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18790 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-fonts/pxfonts)
18791 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18792 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-fonts/pxfonts)
18793 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18794 % U+227A PRECEDES; precedes; \prec (LaTeX)
18795 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18796 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18797 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18798 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18799 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18800 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18801 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18802 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18803 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18804 % \nprecsim (txfonts/pxfonts)
18805 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18806 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18807 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18808 % \nsuccsim (txfonts/pxfonts)
18809 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18810 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18811 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18812 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18813 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18814 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18815 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18816 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18817 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18818 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18819 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18820 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18821 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18822 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)

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18823 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18824 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18825 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18826 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18827 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18828 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18829 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18830 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
18831 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18832 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
18833 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18834 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18835 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18836 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18837 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18838 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18839 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18840 % \nsqsubset (txfonts/pxfonts)
18841 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18842 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18843 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18844 % \nsqsupset (txfonts/pxfonts)
18845 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18846 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18847 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18848 % \nsqsubseteq (txfonts/pxfonts)
18849 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18850 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18851 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18852 % \nsqsupseteq (txfonts/pxfonts)
18853 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18854 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18855 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18856 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18857 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18858 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18859 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18860 %* \textoplus -> \varoplus (stmaryrd)
18861 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18862 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18863 %* \textominus -> \varominus (stmaryrd)
18864 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18865 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18866 %* \textotimes -> \varotimes (stmaryrd)
18867 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18868 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18869 %* \textoslash -> \varoslash (stmaryrd)
18870 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)

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18871 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18872 %* \textodot -> \varodot (stmaryrd)
18873 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18874 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18875 %* \textcircledcirc -> \ocirc (mathabx)
18876 %* \textcircledcirc -> \varocircle (stmaryrd)
18877 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18878 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18879 %* \textcircledast -> \varoast (stmaryrd)
18880 %* \textcircledast -> \oasterisk (mathabx)
18881 % U+229D CIRCLED DASH; \circleddash (AmS)
18882 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18883 % U+229E SQUARED PLUS; \boxplus (AmS)
18884 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18885 % U+229F SQUARED MINUS; \boxminus (AmS)
18886 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18887 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18888 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18889 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18890 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18891 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18892 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18893 %* \textvdash -> \rightvdash (MnSymbol)
18894 % U+22A3 LEFT TACK; \dashleftarrow (LaTeX)
18895 \DeclareTextCommand{\textdashleftarrow}{PU}{\9042\243}%* U+22A3
18896 %* \textdashleftarrow -> \leftvdash (MnSymbol)
18897 % \ndashleftarrow (mathabx)
18898 \DeclareTextCommand{\textndashleftarrow}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18899 %* \textndashleftarrow -> \leftvdash (MnSymbol)
18900 % U+22A4 DOWN TACK (=top); \dashrightarrow (LaTeX)
18901 \DeclareTextCommand{\textdashrightarrow}{PU}{\9042\244}%* U+22A4
18902 %* \textdashrightarrow -> \downvdash (MnSymbol)
18903 % \ndashrightarrow (MnSymbol)
18904 \DeclareTextCommand{\textndashrightarrow}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18905 % U+22A5 UP TACK (=base, bottom); \dashv (LaTeX)
18906 \DeclareTextCommand{\textdashv}{PU}{\9042\245}%* U+22A5
18907 %* \textdashv -> \upvdash (MnSymbol)
18908 % \nupvdash (MnSymbol)
18909 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18910 %* \textnupvdash -> \nperp (MnSymbol)
18911 % U+22A8 TRUE; \vdash (AmS)
18912 \DeclareTextCommand{\textvdash}{PU}{\9042\250}%* U+22A8
18913 %* \textvdash -> \models (LaTeX)
18914 %* \textvdash -> \rightmodels (MnSymbol)
18915 % U+22A9 FORCES; \Vdash (AmS)
18916 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18917 %* \textVdash -> \rightVdash (MnSymbol)
18918 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vdash (AmS)
18919 \DeclareTextCommand{\textVdash}{PU}{\9042\252}%* U+22AA
18920 % \nVdash (mathabx)

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18921 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18922 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18923 % \VDash (mathabx)
18924 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18925 %* \textVDash -> \rightModels (MnSymbol)
18926 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18927 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18928 %* \textnvdash -> \nrightvdash (MnSymbol)
18929 % U+22AD NOT TRUE; \nvDash (AmS)
18930 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18931 %* \textnvDash -> \nrightmodels (MnSymbol)
18932 %* \textnvDash -> \nmodels (MnSymbol)
18933 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18934 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18935 %* \textnVdash -> \nrightVdash (MnSymbol)
18936 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18937 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18938 %* \textnVDash -> \nrightModels (MnSymbol)
18939 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18940 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18941 %* \textlhd -> \lessclosed (MnSymbol)
18942 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18943 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18944 %* \textrhd -> \gtrclosed (MnSymbol)
18945 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18946 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18947 %* \textunlhd -> \leqclosed (MnSymbol)
18948 %* \textunlhd -> \trianglelefteq (MnSymbol)
18949 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18950 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18951 %* \textunrhd -> \geqclosed (MnSymbol)
18952 %* \textunrhd -> \trianglerighteq (MnSymbol)
18953 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18954 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18955 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18956 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18957 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18958 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18959 % U+22BB XOR; \veebar (AmS)
18960 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18961 % U+22BC NAND; \barwedge (mathabx)
18962 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18963 % U+22C6 STAR OPERATOR; \star (LaTeX)
18964 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18965 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18966 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18967 % U+22C8 BOWTIE; \bowtie (LaTeX)
18968 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8

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18969 %* \textbowtie -> \Bowtie (wasysym)
18970 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18971 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18972 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18973 % \rtimes (AmS)
18974 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18975 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18976 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18977 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18978 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18979 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18980 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18981 % \nbacksimeq (txfonts/pxfonts)
18982 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18983 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18984 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18985 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18986 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18987 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18988 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18989 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18990 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18991 % \nSubset (txfonts/pxfonts)
18992 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18993 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18994 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18995 % \nSupset (txfonts/pxfonts)
18996 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18997 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18998 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18999 %* \textCap -> \doublecap (mathabx)
19000 % U+22D3 DOUBLE UNION; \Cup (AmS)
19001 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19002 %* \textCup -> \doublecup (mathabx)
19003 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19004 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19005 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19006 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19007 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19008 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19009 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19010 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19011 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19012 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19013 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
19014 % \lesseqgtr (AmS)
19015 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19016 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19017 % \gtreqless (AmS)
19018 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB

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19019 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19020 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19021 % \ncurlyeqprec (mathabx)
19022 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19023 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19024 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19025 % \ncurlyeqsucc (mathabx)
19026 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19027 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19028 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19029 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19030 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19031 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19032 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19033 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19034 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19035 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19036 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19037 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19038 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19039 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19040 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19041 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19042 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19043 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19044 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19045 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19046 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19047 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19048 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19049 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19050 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19051 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19052 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright
    (AmS)
19053 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19054 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19055 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19056 % \ntrianglelefteq (AmS)
19057 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19058 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19059 % \ntrianglerighteq (AmS)
19060 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19061 %* \textntrianglerighteq -> \textngeqclosed
19062 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
19063 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19064 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)

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19065 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 19066 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 19067 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19068 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19069 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19070 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19071 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19072 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19073 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19074 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19075 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19076 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19077 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 19078 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19079 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19080 % U+231A WATCH; \clock (wasysym)
 19081 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19082 %* \textclock -> \Clocklogo (marvosym)
 19083 %* \textclock -> \ClockLogo (marvosym)
 19084 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19085 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19086 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19087 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19088 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19089 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19090 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19091 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19092 % U+2322 FROWN; \frown (LaTeX)
 19093 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19094 % U+2323 SMILE; \smile (LaTeX)
 19095 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19096 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19097 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19098 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
 19099 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19100 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
 19101 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
 19102 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 19103 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 19104 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19105 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19106 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19107 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
 19108 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19109 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19110 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19111 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;

19112 % \notbackslash (wasysym)
 19113 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19114 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 19115 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19116 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19117 % \APLleftarrowbox (wasysym)
 19118 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19119 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19120 % \APLrightarrowbox (wasysym)
 19121 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19122 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLup-
 parrowbox (wasysym)
 19123 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19124 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19125 % \APLdownarrowbox (wasysym)
 19126 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19127 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19128 % \APLinput (wasysym)
 19129 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19130 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19131 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19132 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19133 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19134 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19135 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19136 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19137 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19138 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19139 % \ForwardToIndex (marvosym)
 19140 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19141 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19142 % \RewindToIndex (marvosym)
 19143 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19144 % U+2422 BLANK SYMBOL
 19145 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19146 % U+2423 OPEN BOX; blank
 19147 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19148 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19149 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19150 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19151 % U+2460 CIRCLED DIGIT ONE; onecircle
 19152 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19153 % U+2461 CIRCLED DIGIT TWO; twocircle
 19154 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19155 % U+2462 CIRCLED DIGIT THREE; threecircle
 19156 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19157 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19158 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19159 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19160 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19161 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19162 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19163 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19164 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19165 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19166 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19167 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19168 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19169 % U+2469 CIRCLED NUMBER TEN; tencircle
 19170 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19171 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19172 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19173 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19174 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19175 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19176 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19177 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19178 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19179 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19180 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19181 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19182 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19183 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19184 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19185 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19186 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19187 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19188 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19189 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19190 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19191 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19192 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19193 % \CircledA (marvosym)
 19194 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19195 %* \textCircledA -> \CleaningA
 19196 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19197 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19198 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19199 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19200 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle

19201 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19202 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19203 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19204 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19205 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19206 % \CleaningF (marvosym)
 19207 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19208 % \CleaningFF (marvosym)
 19209 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19210 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19211 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19212 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19213 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19214 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19215 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19216 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19217 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19218 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19219 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19220 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19221 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19222 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19223 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19224 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19225 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19226 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19227 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19228 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19229 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19230 % \CleaningP (marvosym)
 19231 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19232 % \CleaningPP (marvosym)
 19233 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19234 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19235 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19236 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19237 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19238 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19239 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19240 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19241 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19242 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19243 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19244 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19245 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19246 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19247 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19248 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19249 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19250 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle

19251 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
19252 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
19253 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
19254 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
19255 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
19256 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
19257 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
19258 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
19259 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
19260 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
19261 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
19262 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
19263 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
19264 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
19265 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
19266 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
19267 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
19268 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
19269 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
19270 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
19271 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
19272 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
19273 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
19274 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
19275 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
19276 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
19277 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
19278 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
19279 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
19280 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
19281 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
19282 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
19283 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
19284 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
19285 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
19286 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
19287 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
19288 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
19289 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
19290 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
19291 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
19292 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
19293 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
19294 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
19295 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
19296 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
19297 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
19298 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
19299 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
19300 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle

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19301 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
19302 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
19303 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
19304 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
19305 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
19306 % U+24EA CIRCLED DIGIT ZERO
19307 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

```

51.2.27 Box Drawing: U+2500 to 257F

```

19308 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
      Line (marvosym)
19309 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
19310 %* \textCuttingLine -> \Kutline (marvosym)
19311 %* \textCuttingLine -> \CutLine (marvosym)
19312 %* \textCuttingLine -> \Cutline (marvosym)

```

51.2.28 Geometric Shapes: U+25A0 to U+25FF

```

19313 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
19314 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
19315 %* \textUParrow -> \MoveUp (marvosym)
19316 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
19317 % \bigtriangleup (LaTeX)
19318 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
19319 %* \textbigtriangleup -> \APLup (wasysym)
19320 %* \textbigtriangleup -> \Bleech (marvosym)
19321 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19322 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19323 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
      tion);
19324 % whiterightpointingtriangle; \triangleright (LaTeX)
19325 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19326 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19327 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19328 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19329 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19330 %* \textDOWNarrow -> \MoveDown (marvosym)
19331 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
19332 % \bigtriangledown (LaTeX)
19333 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19334 %* \textbigtriangledown -> \APLdown (wasysym)
19335 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19336 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19337 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
      striction);
19338 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19339 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19340 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19341 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19342 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)

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19343 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19344 %* \textdiamond -> \Diamond (wasysym)
19345 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19346 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19347 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19348 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19349 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19350 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19351 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19352 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19353 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19354 % \boxbar (stmaryrd)
19355 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19356 % U+25EF LARGE CIRCLE; largecircle
19357 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19358 %* \textbigcircle -> \varbigcirc (stmaryrd)
19359 %

```

51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

```

19360 % U+2601 CLOUD; \Cloud (ifsym)
19361 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19362 % U+2605 BLACK STAR; \FiveStar (bbding)
19363 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19364 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19365 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19366 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19367 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19368 %* \textPhone -> \Telefon (marvosym)
19369 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19370 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19371 %* \textboxempty -> \Box (wasysym)
19372 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19373 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19374 %* \textCheckedbox -> \CheckedBox (marvosym)
19375 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19376 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19377 %* \textCrossedbox -> \XBox (wasysym)
19378 %* \textCrossedbox -> \CrossedBox (marvosym)
19379 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19380 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19381 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19382 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19383 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
19384 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19385 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19386 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19387 %* \textHandLeft -> \rightpointleft (fourier)
19388 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19389 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19390 %* \textHandRight -> \leftpointright (fourier)

```


19391 %* \textHandRight -> \PointingHand (marvosym)
19392 %* \textHandRight -> \Pointinghand (marvosym)
19393 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19394 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19395 %* \textRadioactivity -> \Radiation (ifsym)
19396 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19397 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19398 % U+2625 ANKH; \Ankh (marvosym)
19399 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19400 % U+262F YIN YANG; \YinYang (marvosym)
19401 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19402 %* \textYinYang -> \Yinyang (marvosym)
19403 %* \textYinYang -> \YingYang (marvosym)
19404 %* \textYinYang -> \Yingyang (marvosym)
19405 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19406 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19407 %* \textfrownie -> \Frowny (marvosym)
19408 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19409 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19410 %* \textsmiley -> \Smiley (marvosym)
19411 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19412 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19413 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19414 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19415 %* \textsun -> \Sun (marvosym)
19416 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19417 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19418 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19419 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19420 % U+263F MERCURY; \mercury (wasysym)
19421 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19422 %* \textmercury -> \Mercury (marvosym)
19423 % U+2640 FEMALE SIGN; female; \female (wasysym)
19424 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19425 %* \textPUfemale -> \textfemale (tipx)
19426 %* \textPUfemale -> \female (wasysym)
19427 %* \textPUfemale -> \venus (wasysym)
19428 %* \textPUfemale -> \Venus (marvosym)
19429 %* \textPUfemale -> \Female (marvosym)
19430 % U+2641 EARTH; \earth (wasysym)
19431 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19432 %* \textearth -> \Earth (marvosym)
19433 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19434 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19435 %* \textmale -> \mars (wasysym)
19436 %* \textmale -> \Mars (marvosym)
19437 %* \textmale -> \Male (marvosym)
19438 % U+2643 JUPITER; \jupiter (wasysym)
19439 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19440 %* \textjupiter -> \Jupiter (marvosym)

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19441 % U+2644 SATURN; \saturn (wasysym)
19442 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19443 %* \textsaturn -> \Saturn (marvosym)
19444 % U+2645 URANUS; \uranus (wasysym)
19445 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19446 %* \texturanus -> \Uranus (marvosym)
19447 % U+2646 NEPTUNE; \neptune (wasysym)
19448 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19449 %* \textneptune -> \Neptune (marvosym)
19450 % U+2647 PLUTO; \pluto (wasysym)
19451 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19452 %* \textpluto -> \Pluto (marvosym)
19453 % U+2648 ARIES; \aries (wasysym)
19454 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19455 %* \textaries -> \Aries (marvosym)
19456 % U+2649 TAURUS; \taurus (wasysym)
19457 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19458 %* \texttaurus -> \Taurus (marvosym)
19459 % U+264A GEMINI; \gemini (wasysym)
19460 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19461 %* \textgemini -> \Gemini (marvosym)
19462 % U+264B CANCER; \cancer (wasysym)
19463 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19464 %* \textcancer -> \Cancer (marvosym)
19465 % U+264C LEO; \leo (wasysym)
19466 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19467 %* \textleo -> \Leo (marvosym)
19468 % U+264D VIRGO; \virgo (wasysym)
19469 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19470 %* \textvirgo -> \Virgo (marvosym)
19471 % U+264E LIBRA; \libra (wasysym)
19472 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19473 %* \textlibra -> \Libra (marvosym)
19474 % U+264F SCORPIO; \scorpio (wasysym)
19475 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19476 %* \textscorpio -> \Scorpio (marvosym)
19477 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19478 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19479 %* \textsagittarius -> \Sagittarius (marvosym)
19480 % U+2651 CAPRICORN; \capricornus (wasysym)
19481 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19482 %* \textcapricornus -> \Capricorn (marvosym)
19483 % U+2652 AQUARIUS; \aquarius (wasysym)
19484 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19485 %* \textaquarius -> \Aquarius (marvosym)
19486 % U+2653 PISCES; \pisces (wasysym)
19487 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19488 %* \textpisces -> \Pisces (marvosym)
19489 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19490 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}%* U+2660

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19491 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19492 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19493 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19494 %* \textheartsuitwhite -> \Heart (marvosym)
19495 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19496 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19497 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19498 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19499 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19500 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19501 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19502 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19503 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19504 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19505 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19506 % U+2666 BLACK DIAMOND SUIT; diamond
19507 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19508 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19509 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19510 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19511 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19512 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19513 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19514 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19515 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19516 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19517 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19518 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19519 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19520 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19521 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19522 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19523 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19524 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19525 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19526 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19527 %* \textrecycle -> \Recycling (marvosym)
19528 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19529 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19530 % U+2691 BLACK FLAG; \Flag (ifsym)
19531 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19532 %* \textFlag -> \VarFlag (ifsym)
19533 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19534 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19535 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19536 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19537 %* \textdsmilitary -> \textxswup (fourier)
19538 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19539 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695

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19540 % U+2696 SCALES; \dsjuridical (dictsym)
 19541 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19542 % U+2697 ALEMBIC; \dschemical (dictsym)
 19543 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19544 % U+2698 FLOWER; \dsbiological (dictsym)
 19545 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19546 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19547 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19548 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19549 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19550 % U+26A0 WARNING SIGN; \danger (fourier)
 19551 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19552 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19553 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19554 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19555 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19556 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19557 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19558 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19559 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19560 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19561 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19562 % U+26AD MARRIAGE SYMBOL
 19563 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19564 % U+26AE DIVORCE SYMBOL
 19565 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19566 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19567 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19568 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19569 % U+26B9 SEXTILE; \hexstar (wasysym)
 19570 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19571 % U+26BD SOCCER BALL; \Football (marvosym)
 19572 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19573 %* \textSoccerBall -> \Football (marvosym)
 19574 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19575 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19576 % U+26C6 RAIN; \Rain (ifsym)
 19577 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19578 % U+26D4 NO ENTRY; \noway (fourier)
 19579 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19580 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19581 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19582 % U+26FA TENT; \Tent (ifsym)
 19583 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19584 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 19585 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19586 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)

19587 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19588 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19589 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19590 %* \textScissorRight -> \RightScissors (marvosym)
 19591 %* \textScissorRight -> \Leftscissors (marvosym)
 19592 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19593 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19594 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19595 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19596 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19597 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19598 % U+2707 TAPE DRIVE; \Tape (bding)
 19599 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19600 % U+2708 AIRPLANE; \Plane (bding)
 19601 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19602 % U+2709 ENVELOPE; \Envelope (bding),
 19603 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19604 %* \textEnvelope -> \Letter (marvosym)
 19605 % U+270C VICTORY HAND; \Peace (bding)
 19606 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19607 % U+270D WRITING HAND; \WritingHand (marvosym)
 19608 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19609 %* \textWritingHand -> \Writinghand (marvosym)
 19610 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19611 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19612 % U+270F PENCIL; \PencilRight (bding)
 19613 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19614 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19615 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19616 % U+2711 WHITE NIB; \NibRight (bding)
 19617 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19618 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19619 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19620 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19621 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19622 %* \textCheckmark -> \checkmark (MnSymbol)
 19623 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19624 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19625 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19626 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19627 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19628 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19629 % U+2717 BALLOT X; \XSolidBrush (bding)
 19630 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19631 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19632 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19633 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19634 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19635 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19636 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B

19637 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19638 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19639 % U+271D LATIN CROSS; \Cross (bding)
 19640 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19641 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19642 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19643 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19644 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19645 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19646 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19647 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19648 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19649 %* \textDavidStar -> \davidstar (wasysym)
 19650 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19651 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19652 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19653 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19654 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19655 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19656 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19657 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19658 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19659 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19660 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19661 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19662 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19663 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19664 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19665 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19666 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19667 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19668 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19669 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19670 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19671 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19672 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19673 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19674 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19675 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19676 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19677 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19678 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19679 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19680 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19681 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19682 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19683 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19684 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19685 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736

19686 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19687 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19688 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19689 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19690 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19691 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19692 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19693 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19694 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19695 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19696 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19697 % \SixFlowerOpenCenter (bding)
 19698 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19699 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19700 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19701 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19702 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19703 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19704 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19705 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19706 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19707 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19708 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19709 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19710 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19711 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19712 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19713 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19714 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19715 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19716 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19717 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19718 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19719 % U+2747 SPARKLE; \Sparkle (bding)
 19720 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19721 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19722 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19723 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19724 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19725 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19726 % \EightFlowerPetalRemoved (bding)
 19727 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19728 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

19729 % \EightAsterisk (bding)
 19730 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19731 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19732 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19733 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19734 % \SquareShadowBottomRight (bding)
 19735 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19736 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19737 % \SquareShadowTopRight (bding)
 19738 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19739 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19740 % \SquareCastShadowBottomRight (bding)
 19741 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19742 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19743 % \SquareCastShadowTopRight (bding)
 19744 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19745 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 19746 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19747 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 19748 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19749 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 19750 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19751 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 19752 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19753 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19754 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19755 % \notperp (mathabx)
 19756 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19757 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19758 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19759 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19760 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19761 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19762 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19763 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19764 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19765 %* \textlbrackdbl -> \lbracket (stmaryrd)
 19766 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19767 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19768 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19769 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19770 % \circlearrowleft (AmS)
 19771 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19772 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19773 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3

19774 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19775 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19776 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19777 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19778 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 19779 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 19780 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19781 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19782 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19783 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19784 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 19785 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 19786 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19787 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19788 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19789 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19790 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19791 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19792 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19793 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19794 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 19795 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19796 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 19797 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19798 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19799 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19800 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 19801 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19802 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19803 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19804 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19805 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19806 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19807 % \rcurvearrowne (MnSymbol)
 19808 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19809 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19810 % \lcurvearrowse (MnSymbol)
 19811 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19812 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19813 % \lcurvearrowsw (MnSymbol)
 19814 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19815 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-

WARDS;

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19816 % \rcurvearrowse (MnSymbol)
19817 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
19818 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
Symbol)
19819 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19820 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19821 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19822 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19823 % \rcurvearrowdown (MnSymbol)
19824 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
19825 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
19826 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
19827 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
19828 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
19829 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19830 % \rcurvearrowright (MnSymbol)
19831 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
19832 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
19833 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19834 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
19835 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19836 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19837 % \updownharpoonrightleft (MnSymbol)
19838 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19839 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19840 % \updownharpoonleftright (MnSymbol)
19841 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19842 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19843 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19844 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19845 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19846 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19847 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19848 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
19849 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19850 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19851 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19852 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19853 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19854 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19855 % \leftbarharpoon (mathabx)
19856 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19857 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19858 % LONG DASH; \barleftharpoon (mathabx)

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19859 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19860 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19861 % LONG DASH; \rightbarharpoon (mathabx)
 19862 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19863 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19864 % LONG DASH; \barrightharpoon (mathabx)
 19865 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19866 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19867 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19868 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19869 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19870 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19871 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19872 % U+297F DOWN FISH TAIL
 19873 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19874 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19875 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 19876 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19877 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19878 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19879 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19880 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19881 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19882 %* \textobar -> \textvarobar (stmaryrd)
 19883 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19884 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19885 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19886 %* \textobslash -> \obackslash (mathabx)
 19887 %* \textobslash -> \varobslash (stmaryrd)
 19888 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19889 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19890 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19891 %* \textobot -> \odplus (ulsy)
 19892 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 19893 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19894 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19895 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19896 %* \textolessthan -> \varolessthan (stmaryrd)
 19897 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19898 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19899 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19900 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19901 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19902 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19903 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5

19904 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19905 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19906 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19907 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19908 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19909 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19910 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19911 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19912 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19913 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19914 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19915 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19916 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19917 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19918 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19919 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19920 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19921 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19922 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19923 % pxfonts, wasysym)
 19924 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19925 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19926 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19927 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19928 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19929 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19930 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19931 %* \textminusdot -> \divdot (mathabx)
 19932 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 19933 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19934 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19935 % \dtimes (mathdesign)
 19936 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19937 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19938 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19939 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19940 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19941 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19942 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19943 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19944 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19945 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19946 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 19947 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 19948 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 19949 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 19950 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 19951 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)

19952 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19953 %* \textdoublevee -> \merge (stmaryrd)
19954 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19955 % \doublebarwedge (AmS)
19956 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19957 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19958 % \veedoublebar (mahtabx)
19959 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19960 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19961 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19962 % \neqdot (MnSymbol)
19963 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19964 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19965 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19966 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19967 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19968 % \nleqslant (txfonts/pxfonts)
19969 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19970 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19971 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19972 % \ngeqslant (txfonts/pxfonts)
19973 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19974 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19975 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19976 % \nlessapprox (txfonts/pxfonts)
19977 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19978 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19979 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19980 % \ngtrapprox (txfonts/pxfonts)
19981 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19982 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19983 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19984 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19985 % \gneq (AmS)
19986 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19987 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19988 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19989 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19990 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19991 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
THAN;
19992 % \lesseqgtr (AmS)
19993 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19994 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
THAN;
19995 % \gtreqless (AmS)
19996 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19997 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19998 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19999 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)

20000 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20001 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20002 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20003 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20004 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20005 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-Symbol)
 20006 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20007 % \npreceq (txfonts/pxfonts)
 20008 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20009 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-Symbol)
 20010 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20011 % \nsucceq (txfonts/pxfonts)
 20012 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20013 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq (mathabx)
 20014 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20015 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
 20016 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20017 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20018 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20019 % \npreceqq (txfonts/pxfonts)
 20020 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20021 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20022 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20023 % \nsucceqq (txfonts/pxfonts)
 20024 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20025 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20026 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20027 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20028 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20029 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20030 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20031 % \nprecapprox (txfonts/pxfonts)
 20032 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20033 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20034 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20035 % \nsuccapprox (txfonts/pxfonts)
 20036 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20037 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
 20038 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20039 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
 20040 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20041 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20042 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20043 % \nsubseteqq (txfonts/pxfonts, mathabx)

20044 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20045 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20046 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20047 % \nsupseteqq (mathabx)
 20048 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20049 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20050 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20051 %* \textdashV -> \leftVdash (MnSymbol)
 20052 % \ndashV (mathabx)
 20053 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20054 %* \textndashV -> \nleftVdash (MnSymbol)
 20055 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20056 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20057 %* \textDashv -> \leftmodels (MnSymbol)
 20058 % \nDashv (mathabx)
 20059 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20060 %* \textnDashv -> \nleftmodels (MnSymbol)
 20061 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20062 % \DashV (mathabx)
 20063 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20064 %* \textDashV -> \leftModels (MnSymbol)
 20065 % \nDashV (mathabx)
 20066 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20067 %* \textnDashV -> \nleftModels (MnSymbol)
 20068 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20069 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20070 % \ndownmodels (MnSymbol)
 20071 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20072 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20073 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20074 % \nupmodels (MnSymbol)
 20075 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20076 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20077 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20078 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20079 % \interleave (stmaryrd)
 20080 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20081 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20082 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20083 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20084 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20085 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20086 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20087 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20088 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20089 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20090 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
20091 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
20092 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
20093 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
20094 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
20095 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20096 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
20097 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
20098 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
20099 % \textdownstep (tipa)
20100 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20101 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
20102 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
20103 %* \textPUheng -> \textheng (tipx)
20104 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
20105 \DeclareTextCommand{\textPUIhookfour}{PU}{\9247\054}% U+A72C
20106 %* \textPUIhookfour -> \textlhookfour (tipx)
20107 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
20108 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
20109 %* \textPUscf -> \textscf (tipx)
20110 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
20111 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
20112 %* \textPUaolig -> \textaoilig (tipx)
20113 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
20114 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
20115 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
20116 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20117 % U+FB01 LATIN SMALL LIGATURE FI; fi
20118 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
20119 % U+FB02 LATIN SMALL LIGATURE FL; fl
20120 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20121 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
20122 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
20123 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
20124 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
20125 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
20126 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
20127 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
20128 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
20129 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)

20130 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20131 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20132 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20133 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20134 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20135 %* \textfullnote -> \Ganz (harmony)
 20136 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20137 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20138 %* \texthalfnote -> \Halb (harmony)
 20139 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20140 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20141 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20142 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20143 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20144 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20145 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20146 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20147 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20148 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20149 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20150 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20151 % U+1F468 MAN; \ManFace (marvosym)
 20152 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20153 % U+1F469 WOMAN; \WomanFace (marvosym)
 20154 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20155 %* \textWomanFace -> \Womanface (marvosym)
 20156 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20157 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20158 %* \textFax -> \Faxmachine (marvosym)
 20159 % U+1F525 FIRE; \Fire (ifsym)
 20160 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20161 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20162 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20163 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20164 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20165 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20166 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20167 \DeclareTextCommand{\SS}{PU}{SS}%
 20168 % \textcopyleft (textcomp)
 20169 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20170 % \ccnc (cclicenss)
 20171 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20172 % \ccnd (cclicenss)
 20173 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD

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20174 % \ccsa (ccllicenses)
20175 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20176 % \Info (marvosym, china2e)
20177 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20178 % \CESign (marvosym)
20179 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20180 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20181 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20182 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20183 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20184 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20185 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20186 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20187 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20188 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20189 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20190 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20191 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20192 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20193 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20194 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20195 <*puvnenc>
20196 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20197 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20198 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20199 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20200 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20201 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20202 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20203 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20204 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20205 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20206 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20207 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20208 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20209 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20210 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
20211 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20212 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3

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20213 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20214 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20215 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20216 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20217 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20218 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20219 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20220 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20221 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20222 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20223 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20224 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20225 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20226 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20227 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20228 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20229 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20230 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20231 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20232 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20233 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20234 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20235 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20236 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20237 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20238 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20239 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20240 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20241 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20242 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20243 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20244 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20245 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20246 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20247 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20248 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20249 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20250 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20251 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20252 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20253 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20254 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20255 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20256 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20257 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20258 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20259 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20260 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20261 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20262 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF

20263 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20264 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20265 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20266 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20267 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20268 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20269 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20270 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20271 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20272 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20273 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20274 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20275 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20276 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20277 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20278 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20279 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20280 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20281 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20282 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20283 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20284 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20285 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20286 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20287 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20288 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20289 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20290 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20291 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20292 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20293 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20294 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20295 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20296 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20297 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20298 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20299 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20300 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20301 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20302 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20303 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20304 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20305 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20306 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20307 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20308 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20309 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20310 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20311 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20312 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0

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20313 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20314 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20315 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
20316 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20317 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20318 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20319 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20320 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
20321 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20322 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20323 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20324 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20325 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20326 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20327 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20328 </puvnenc>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20329 <*puarenc>

20330 % U+0621;afii57409;ARABIC LETTER HAMZA
20331 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20332 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20333 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20334 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20335 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20336 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20337 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20338 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20339 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20340 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20341 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20342 % U+0627;afii57415;ARABIC LETTER ALEF
20343 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20344 % U+0628;afii57416;ARABIC LETTER BEH
20345 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20346 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20347 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20348 % U+062A;afii57418;ARABIC LETTER TEH
20349 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20350 % U+062B;afii57419;ARABIC LETTER THEH
20351 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20352 % U+062C;afii57420;ARABIC LETTER JEEM
20353 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20354 % U+062D;afii57421;ARABIC LETTER HAH
20355 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20356 % U+062E;afii57422;ARABIC LETTER KHAH

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20357 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20358 % U+062F;afii57423;ARABIC LETTER DAL
 20359 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20360 % U+0630;afii57424;ARABIC LETTER THAL
 20361 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20362 % U+0631;afii57425;ARABIC LETTER REH
 20363 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20364 % U+0632;afii57426;ARABIC LETTER ZAIN
 20365 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20366 % U+0633;afii57427;ARABIC LETTER SEEN
 20367 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20368 % U+0634;afii57428;ARABIC LETTER SHEEN
 20369 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20370 % U+0635;afii57429;ARABIC LETTER SAD
 20371 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20372 % U+0636;afii57430;ARABIC LETTER DAD
 20373 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20374 % U+0637;afii57431;ARABIC LETTER TAH
 20375 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20376 % U+0638;afii57432;ARABIC LETTER ZAH
 20377 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20378 % U+0639;afii57433;ARABIC LETTER AIN
 20379 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20380 % U+063A;afii57434;ARABIC LETTER GHAIN
 20381 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20382 % U+0640;afii57440;ARABIC TATWEEL
 20383 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20384 % U+0641;afii57441;ARABIC LETTER FEH
 20385 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20386 % U+0642;afii57442;ARABIC LETTER QAF
 20387 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20388 % U+0643;afii57443;ARABIC LETTER KAF
 20389 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20390 % U+0644;afii57444;ARABIC LETTER LAM
 20391 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20392 % U+0645;afii57445;ARABIC LETTER MEEM
 20393 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20394 % U+0646;afii57446;ARABIC LETTER NOON
 20395 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20396 % U+0647;afii57470;ARABIC LETTER HEH
 20397 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20398 % U+0648;afii57448;ARABIC LETTER WAW
 20399 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20400 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20401 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20402 % U+064A;afii57450;ARABIC LETTER YEH
 20403 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A
 20404 % U+064B;afii57451;ARABIC FATHATAN
 20405 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B

20406 % U+064C;afi57452;ARABIC DAMMATAN
 20407 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20408 % U+064D;afi57453;ARABIC KASRATAN
 20409 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20410 % U+064E;afi57454;ARABIC FATHA
 20411 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20412 % U+064F;afi57455;ARABIC DAMMA
 20413 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20414 % U+0650;afi57456;ARABIC KASRA
 20415 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20416 % U+0651;afi57457;ARABIC SHADDA
 20417 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20418 % U+0652;afi57458;ARABIC SUKUN
 20419 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20420 % U+067E ARABIC LETTER PEH; afi57506
 20421 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20422 % U+0686 ARABIC LETTER TCHEH; afi57507
 20423 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20424 % U+0698 ARABIC LETTER JEH; afi57508
 20425 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20426 % U+06A9 ARABIC LETTER KEHEH
 20427 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20428 % U+06AF ARABIC LETTER GAF; afi57509
 20429 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20430 % U+06CC ARABIC LETTER FARSI YEH
 20431 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20432 % U+200C ZERO WIDTH NON-JOINER; afi61664
 20433 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20434 % U+200D ZERO WIDTH JOINER; afi301
 20435 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 20436 </puarenc>
 20437 <*psdextra>
 20438 \Hy@VersionCheck{psdextra.def}
 20439 \newcommand*{\psdmapshortnames}{%
 20440 \let\MVPlus\textMVPlus
 20441 \let\MVComma\textMVComma
 20442 \let\MVMinus\textMVMinus
 20443 \let\MVPeriod\textMVPeriod
 20444 \let\MVDivision\textMVDivision
 20445 \let\MVZero\textMVZero
 20446 \let\MVOne\textMVOne
 20447 \let\MVTwo\textMVTwo
 20448 \let\MVThree\textMVThree
 20449 \let\MVFour\textMVFour
 20450 \let\MVFive\textMVFive
 20451 \let\MVSix\textMVSix
 20452 \let\MVSeven\textMVSSeven

20453 \let\MVEight\textMVEight
 20454 \let\MVNNine\textMVNNine
 20455 \let\MVAt\textMVAt
 20456 \let\copyright\textcopyright
 20457 \let\twosuperior\texttwosuperior
 20458 \let\threesuperior\textthreesuperior
 20459 \let\onesuperior\textonesuperior
 20460 \let\Thorn\textThorn
 20461 \let\thorn\textthorn
 20462 \let\hbar\texthbar
 20463 \let\hausab\texthausab
 20464 \let\hausad\texthausad
 20465 \let\hausak\texthausak
 20466 \let\barl\textbarl
 20467 \let\inve\textinve
 20468 \let\slashc\textslashc
 20469 \let\scripta\textscripta
 20470 \let\openo\textopeno
 20471 \let\rtaild\textrtaild
 20472 \let\reve\textreve
 20473 \let\schwa\textschwa
 20474 \let\niepsilon\textniepsilon
 20475 \let\revepsilon\textrevepsilon
 20476 \let\rhookrevepsilon\texthookrevepsilon
 20477 \let\scriptg\textscriptg
 20478 \let\scg\textscg
 20479 \let\ipagamma\textipagamma
 20480 \let\babygamma\textbabygamma
 20481 \let\bari\textbari
 20482 \let\niiota\textniiota
 20483 \let\sci\textsci
 20484 \let\scn\textscn
 20485 \let\niphi\textniphi
 20486 \let\longlegr\textlonglegr
 20487 \let\scr\textscr
 20488 \let\invscr\textinvscr
 20489 \let\esh\textesh
 20490 \let\baru\textbaru
 20491 \let\niupsilon\textniupsilon
 20492 \let\scriptv\textscriptv
 20493 \let\turnv\textturnv
 20494 \let\turnw\textturnw
 20495 \let\turny\textturny
 20496 \let\scy\textscy
 20497 \let\yogh\textyogh
 20498 \let\glotstop\textglotstop
 20499 \let\revglotstop\textrevglotstop
 20500 \let\invglotstop\textinvglotstop
 20501 \let\Gamma\textGamma
 20502 \let\Delta\textDelta

20503 \let\Theta\textTheta
 20504 \let\Lambda\textLambda
 20505 \let\Xi\textXi
 20506 \let\Pi\textPi
 20507 \let\Sigma\textSigma
 20508 \let\Upsilon\textUpsilon
 20509 \let\Phi\textPhi
 20510 \let\Psi\textPsi
 20511 \let\Omega\textOmega
 20512 \let\alpha\textalpha
 20513 \let\beta\textbeta
 20514 \let\gamma\textgamma
 20515 \let\delta\textdelta
 20516 \let\epsilon\textepsilon
 20517 \let\zeta\textzeta
 20518 \let\eta\texteta
 20519 \let\theta\texttheta
 20520 \let\iota\textiota
 20521 \let\kappa\textkappa
 20522 \let\lambda\textlambda
 20523 \let\mu\textmu
 20524 \let\mugreek\textmugreek
 20525 \let\nu\textnu
 20526 \let\xi\textxi
 20527 \let\pi\textpi
 20528 \let\rho\textrho
 20529 \let\varsigma\textvarsigma
 20530 \let\sigma\textsigma
 20531 \let\tau\texttau
 20532 \let\upsilon\textupsilon
 20533 \let\phi\textphi
 20534 \let\chi\textchi
 20535 \let\psi\textpsi
 20536 \let\omega\textomega
 20537 \let\scd\textscd
 20538 \let\scu\textscu
 20539 \let\iinferior\textiinferior
 20540 \let\rinferior\textrinferior
 20541 \let\uiinferior\textuinferior
 20542 \let\vinferior\textvinferior
 20543 \let\betainferior\textbetainferior
 20544 \let\gammainferior\textgammainferior
 20545 \let\rhoinferior\textrhoinferior
 20546 \let\phiinferior\textphiinferior
 20547 \let\chiinferior\textchiinferior
 20548 \let\barsci\textbarsci
 20549 \let\barp\textbarp
 20550 \let\barscu\textbarscu
 20551 \let\htrtaild\texthtrtaild
 20552 \let\dagger\textdagger

20553 \let\bullet\textbullet
 20554 \let\hdotfor\texthdotfor
 20555 \let\prime\textprime
 20556 \let\second\textsecond
 20557 \let\third\textthird
 20558 \let\backprime\textbackprime
 20559 \let\lefttherefore\textlefttherefore
 20560 \let\fourth\textfourth
 20561 \let\diamonddots\textdiamonddots
 20562 \let\zerosuperior\textzerosuperior
 20563 \let\isuperior\textisuperior
 20564 \let\foursuperior\textfoursuperior
 20565 \let\fivesuperior\textfivesuperior
 20566 \let\sixsuperior\textsixsuperior
 20567 \let\sevensuperior\textsevensuperior
 20568 \let\eightsuperior\texteightsuperior
 20569 \let\ninesuperior\textninesuperior
 20570 \let\plussuperior\textplussuperior
 20571 \let\minussuperior\textminussuperior
 20572 \let>equalsuperior\textequalsuperior
 20573 \let\parenleftsuperior\textparenleftsuperior
 20574 \let\parenrightsuperior\textparenrightsuperior
 20575 \let\nsuperior\textnsuperior
 20576 \let\zeroinferior\textzeroinferior
 20577 \let\oneinferior\textoneinferior
 20578 \let\twoinferior\texttwoinferior
 20579 \let\threeinferior\textthreeinferior
 20580 \let\fourinferior\textfourinferior
 20581 \let\fiveinferior\textfiveinferior
 20582 \let\sixinferior\textsixinferior
 20583 \let\seveninferior\textseveninferior
 20584 \let\eightinferior\texteightinferior
 20585 \let\nineinferior\textnineinferior
 20586 \let\plusinferior\textplusinferior
 20587 \let\minusinferior\textminusinferior
 20588 \let>equalsinferior\textequalsinferior
 20589 \let\parenleftinferior\textparenleftinferior
 20590 \let\parenrightinferior\textparenrightinferior
 20591 \let\ainferior\textainferior
 20592 \let\einferior\texteinferior
 20593 \let\oinferior\textoinferior
 20594 \let\xinferior\textxinferior
 20595 \let\schwainferior\textschwainferior
 20596 \let\hinferior\texthinferior
 20597 \let\kinferior\textkinferior
 20598 \let\linferior\textlinferior
 20599 \let\mininferior\textmininferior
 20600 \let\ninferior\textninferior
 20601 \let\pinferior\textpinferior
 20602 \let\sinferior\textsinferior

20603 \let\tinferior\texttinferior
 20604 \let\Deleatur\textDeleatur
 20605 \let\hslash\texthslash
 20606 \let\Im\textIm
 20607 \let\ell\textell
 20608 \let\wp\textwp
 20609 \let\Re\textRe
 20610 \let\mho\textmho
 20611 \let\riota\textriota
 20612 \let\Finv\textFinv
 20613 \let\aleph\textaleph
 20614 \let\beth\textbeth
 20615 \let\gimel\textgimel
 20616 \let\daleth\textdaleth
 20617 \let\xfax\textfax
 20618 \let\Game\textGame
 20619 \let\leftarrow\textleftarrow
 20620 \let\uparrow\textuparrow
 20621 \let\rightarrow\textrightarrow
 20622 \let\downarrow\textdownarrow
 20623 \let\leftrightarrow\textleftrightarrow
 20624 \let\updownarrow\textupdownarrow
 20625 \let\nwarrow\textnwarrow
 20626 \let\nearrow\textnearrow
 20627 \let\searrow\textsearrow
 20628 \let\swarrow\textswarrow
 20629 \let\leftleftarrows\textleftleftarrows
 20630 \let\leftrightarrows\textleftrightarrows
 20631 \let\twoheadleftarrow\texttwoheadleftarrow
 20632 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20633 \let\twoheaduparrow\texttwoheaduparrow
 20634 \let\twoheadrightarrow\texttwoheadrightarrow
 20635 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20636 \let\twoheaddownarrow\texttwoheaddownarrow
 20637 \let\leftarrowtail\textleftarrowtail
 20638 \let\rightarrowtail\textrightarrowtail
 20639 \let\mapsto\textmapsto
 20640 \let\hookleftarrow\texthookleftarrow
 20641 \let\hookrightarrow\texthookrightarrow
 20642 \let\looparrowleft\textlooparrowleft
 20643 \let\looparrowright\textlooparrowright
 20644 \let\leftrightharpoons\textleftrightharpoons
 20645 \let\lightning\textlightning
 20646 \let\dashv\textdashv
 20647 \let\curvearrowleft\textcurvearrowleft
 20648 \let\curvearrowright\textcurvearrowright
 20649 \let\lefttharpoonup\textlefttharpoonup
 20650 \let\lefttharpoondown\textlefttharpoondown
 20651 \let\upharpoonright\textupharpoonright
 20652 \let\upharpoonleft\textupharpoonleft

20653 $\backslash\text{rightharpoonup}\backslash\text{textrightharpoonup}$
 20654 $\backslash\text{rightharpoondown}\backslash\text{textrightharpoondown}$
 20655 $\backslash\text{downharpoonright}\backslash\text{textdownharpoonright}$
 20656 $\backslash\text{downharpoonleft}\backslash\text{textdownharpoonleft}$
 20657 $\backslash\text{rightleftarrows}\backslash\text{textrightleftarrows}$
 20658 $\backslash\text{updownarrows}\backslash\text{textupdownarrows}$
 20659 $\backslash\text{leftrightarrows}\backslash\text{textleftrightarrows}$
 20660 $\backslash\text{leftleftarrows}\backslash\text{textleftleftarrows}$
 20661 $\backslash\text{upuparrows}\backslash\text{textupuparrows}$
 20662 $\backslash\text{rightrightarrows}\backslash\text{textrighttrightarrows}$
 20663 $\backslash\text{downdownarrows}\backslash\text{textdowndownarrows}$
 20664 $\backslash\text{leftrightharpoons}\backslash\text{textleftrightharpoons}$
 20665 $\backslash\text{rightleftharpoons}\backslash\text{textrightleftharpoons}$
 20666 $\backslash\text{nLeftarrow}\backslash\text{textnLeftarrow}$
 20667 $\backslash\text{nLeftrightarrow}\backslash\text{textnLeftrightarrow}$
 20668 $\backslash\text{nRrightarrow}\backslash\text{textnRrightarrow}$
 20669 $\backslash\text{Leftarrow}\backslash\text{textLeftarrow}$
 20670 $\backslash\text{Uparrow}\backslash\text{textUparrow}$
 20671 $\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20672 $\backslash\text{Downarrow}\backslash\text{textDownarrow}$
 20673 $\backslash\text{Leftrightarrow}\backslash\text{textLeftrightarrow}$
 20674 $\backslash\text{Updownarrow}\backslash\text{textUpdownarrow}$
 20675 $\backslash\text{Nwarrow}\backslash\text{textNwarrow}$
 20676 $\backslash\text{Nearrow}\backslash\text{textNearrow}$
 20677 $\backslash\text{Searrow}\backslash\text{textSearrow}$
 20678 $\backslash\text{Swarrow}\backslash\text{textSwarrow}$
 20679 $\backslash\text{Lleftarrow}\backslash\text{textLleftarrow}$
 20680 $\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20681 $\backslash\text{leftsquigarrow}\backslash\text{textleftsquigarrow}$
 20682 $\backslash\text{rightsquigarrow}\backslash\text{textrightsquigarrow}$
 20683 $\backslash\text{dashleftarrow}\backslash\text{texdashleftarrow}$
 20684 $\backslash\text{dasheduparrow}\backslash\text{textdasheduparrow}$
 20685 $\backslash\text{dashrightarrow}\backslash\text{texdashrightarrow}$
 20686 $\backslash\text{dasheddownarrow}\backslash\text{textdasheddownarrow}$
 20687 $\backslash\text{pointer}\backslash\text{textpointer}$
 20688 $\backslash\text{downuparrows}\backslash\text{textdownuparrows}$
 20689 $\backslash\text{leftarrowtriangle}\backslash\text{textleftarrowtriangle}$
 20690 $\backslash\text{rightarrowtriangle}\backslash\text{textrightarrowtriangle}$
 20691 $\backslash\text{leftrightarrowtriangle}\backslash\text{textleftrightarrowtriangle}$
 20692 $\backslash\text{forall}\backslash\text{textforall}$
 20693 $\backslash\text{complement}\backslash\text{textcomplement}$
 20694 $\backslash\text{partial}\backslash\text{textpartial}$
 20695 $\backslash\text{exists}\backslash\text{textexists}$
 20696 $\backslash\text{nexists}\backslash\text{textnexists}$
 20697 $\backslash\text{emptyset}\backslash\text{textemptyset}$
 20698 $\backslash\text{triangle}\backslash\text{texttriangle}$
 20699 $\backslash\text{nabla}\backslash\text{textnabla}$
 20700 $\backslash\text{in}\backslash\text{textin}$
 20701 $\backslash\text{notin}\backslash\text{textnotin}$
 20702 $\backslash\text{smallin}\backslash\text{textsmallin}$

20703 \let\ni\textni
 20704 \let\notowner\textnotowner
 20705 \let\smallowns\textsmallowns
 20706 \let\prod\textprod
 20707 \let\amalg\textamalg
 20708 \let\sum\textsum
 20709 \let\mp\textmp
 20710 \let\dotplus\textdotplus
 20711 \let\Divides\textDivides
 20712 \let\DividesNot\textDividesNot
 20713 \let\setminus\textsetminus
 20714 \let\ast\textast
 20715 \let\circ\textcirc
 20716 \let\surd\textsurd
 20717 \let\propto\textpropto
 20718 \let\infty\textinfty
 20719 \let\angle\textangle
 20720 \let\measuredangle\textmeasuredangle
 20721 \let\sphericalangle\textsphericalangle
 20722 \let\mid\textmid
 20723 \let\nmid\textnmid
 20724 \let\parallel\textparallel
 20725 \let\nparallel\textnparallel
 20726 \let\wedge\textwedge
 20727 \let\owedge\textowedge
 20728 \let\vee\textvee
 20729 \let\ovee\textovee
 20730 \let\cap\textcap
 20731 \let\cup\textcup
 20732 \let\int\textint
 20733 \let\iint\textiint
 20734 \let\iiint\textiiint
 20735 \let\oint\textoint
 20736 \let\oiint\textoiint
 20737 \let\ointclockwise\textointclockwise
 20738 \let\ointctrlockwise\textointctrlockwise
 20739 \let\therefore\texttherefore
 20740 \let\because\textbecause
 20741 \let\vdots\textvdots
 20742 \let\squaredots\textsquaredots
 20743 \let\dotminus\textdotminus
 20744 \let\eqcolon\texteqcolon
 20745 \let\sim\textsim
 20746 \let\backsim\textbacksim
 20747 \let\nbacksim\textnbacksim
 20748 \let\wr\textwr
 20749 \let\sim\textsim
 20750 \let\eqsim\texteqsim
 20751 \let\neqsim\textneqsim
 20752 \let\simeq\textsimeq

20753 \let\nsimeq\textnsimeq
 20754 \let\cong\textcong
 20755 \let\ncong\textncong
 20756 \let\approx\textapprox
 20757 \let\napprox\textnapprox
 20758 \let\approxeq\textapproxeq
 20759 \let\napproxeq\textnapproxeq
 20760 \let\triplesim\texttriplesim
 20761 \let\ntriplesim\textntriplesim
 20762 \let\backcong\textbackcong
 20763 \let\nbackcong\textnbackcong
 20764 \let\asympt\textasympt
 20765 \let\nasympt\textnasympt
 20766 \let\Bumpeq\textBumpeq
 20767 \let\NBumpeq\textNBumpeq
 20768 \let\bumpeq\textbumpeq
 20769 \let\Nbumpeq\textNbumpeq
 20770 \let\doteq\textdoteq
 20771 \let\ndoteq\textndoteq
 20772 \let\doteqdot\textdoteqdot
 20773 \let\NDoteq\textNDoteq
 20774 \let\fallingdoteq\textfallingdoteq
 20775 \let\Nfallingdoteq\textNfallingdoteq
 20776 \let\risingdoteq\textrisingdoteq
 20777 \let\Nrisingdoteq\textNrisingdoteq
 20778 \let\colonequals\textcolonequals
 20779 \let\equalscolon\textequalscolon
 20780 \let\eqcirc\texteqcirc
 20781 \let\neqcirc\textneqcirc
 20782 \let\circeq\textcirceq
 20783 \let\ncirceq\textncirceq
 20784 \let\hateq\texthateq
 20785 \let\nhateq\textnhateq
 20786 \let\triangleeq\texttriangleeq
 20787 \let\neq\textneq
 20788 \let\ne\textne
 20789 \let\equiv\textequiv
 20790 \let\nequiv\textnequiv
 20791 \let\leq\textleq
 20792 \let\le\textle
 20793 \let\geq\textgeq
 20794 \let\ge\textge
 20795 \let\leqq\textleqq
 20796 \let\mleqq\textmleqq
 20797 \let\geqq\textgeqq
 20798 \let\ngeqq\textngeqq
 20799 \let\lneqq\textlneqq
 20800 \let\gneqq\textgneqq
 20801 \let\ll\textll
 20802 \let\nll\textnll

20803 \let\gg\textgg
 20804 \let\ngg\textngg
 20805 \let\between\textbetween
 20806 \let\nless\textnless
 20807 \let\ngtr\textngtr
 20808 \let\nleq\textnleq
 20809 \let\ngeq\textngeq
 20810 \let\lesssim\textlesssim
 20811 \let\gtrsim\textgtrsim
 20812 \let\nlesssim\textnlesssim
 20813 \let\ngtrsim\textngtrsim
 20814 \let\lessgtr\textlessgtr
 20815 \let\gtrless\textgtrless
 20816 \let\ngtrless\textngtrless
 20817 \let\nlessgtr\textnlessgtr
 20818 \let\prec\textprec
 20819 \let\succ\textsucc
 20820 \let\preccurlyeq\textpreccurlyeq
 20821 \let\succcurlyeq\textsucccurlyeq
 20822 \let\precsim\textprecsim
 20823 \let\nprecsim\textnprecsim
 20824 \let\succsim\textsuccsim
 20825 \let\nsuccsim\textnsuccsim
 20826 \let\nprec\textnprec
 20827 \let\nsucc\textnsucc
 20828 \let\subset\textsubset
 20829 \let\supset\textsupset
 20830 \let\nsubset\textnsubset
 20831 \let\nsupset\textnsupset
 20832 \let\subseteq\textsubseteq
 20833 \let\supseteq\textsupseteq
 20834 \let\nsubsubeq\textnsubsubeq
 20835 \let\nsupsubeq\textnsupsubeq
 20836 \let\subsetneq\textsubsetneq
 20837 \let\supsetneq\textsupsetneq
 20838 \let\cupdot\textcupdot
 20839 \let\cupplus\textcupplus
 20840 \let\sqsubset\textsqssubset
 20841 \let\nsqsubset\textnsqsubset
 20842 \let\sqsupset\textsqsupset
 20843 \let\nsqsupset\textnsqsupset
 20844 \let\sqsubsubeq\textsqssubsubeq
 20845 \let\nsqsubsubeq\textnsqsubsubeq
 20846 \let\sqsupsubeq\textsqsupsubeq
 20847 \let\nsqsupsubeq\textnsqsupsubeq
 20848 \let\sqcap\textsqqcap
 20849 \let\sqqcup\textsqqcup
 20850 \let\oplus\textoplus
 20851 \let\ominus\textominus
 20852 \let\otimes\textotimes

20853 $\backslash\text{oslash}$
 20854 $\backslash\text{odot}$
 20855 $\backslash\text{circledcirc}$
 20856 $\backslash\text{circledast}$
 20857 $\backslash\text{circleddash}$
 20858 $\backslash\text{boxplus}$
 20859 $\backslash\text{boxminus}$
 20860 $\backslash\text{boxtimes}$
 20861 $\backslash\text{boxdot}$
 20862 $\backslash\text{vdash}$
 20863 $\backslash\text{dashv}$
 20864 $\backslash\text{ndashv}$
 20865 $\backslash\text{top}$
 20866 $\backslash\text{ndownvdash}$
 20867 $\backslash\text{bot}$
 20868 $\backslash\text{nupvdash}$
 20869 $\backslash\text{vDash}$
 20870 $\backslash\text{Vdash}$
 20871 $\backslash\text{Vvdash}$
 20872 $\backslash\text{nVdash}$
 20873 $\backslash\text{VDash}$
 20874 $\backslash\text{nvDash}$
 20875 $\backslash\text{nvDash}$
 20876 $\backslash\text{nVdash}$
 20877 $\backslash\text{nVDash}$
 20878 $\backslash\text{lhs}$
 20879 $\backslash\text{rhs}$
 20880 $\backslash\text{unlhs}$
 20881 $\backslash\text{unrhs}$
 20882 $\backslash\text{multimapdotbothA}$
 20883 $\backslash\text{multimapdotbothB}$
 20884 $\backslash\text{multimap}$
 20885 $\backslash\text{veebar}$
 20886 $\backslash\text{barwedge}$
 20887 $\backslash\text{star}$
 20888 $\backslash\text{divideontimes}$
 20889 $\backslash\text{bowtie}$
 20890 $\backslash\text{ltimes}$
 20891 $\backslash\text{rtimes}$
 20892 $\backslash\text{leftthreetimes}$
 20893 $\backslash\text{rightthreetimes}$
 20894 $\backslash\text{backsimeq}$
 20895 $\backslash\text{nbacksimeq}$
 20896 $\backslash\text{curlyvee}$
 20897 $\backslash\text{curlywedge}$
 20898 $\backslash\text{Subset}$
 20899 $\backslash\text{nSubset}$
 20900 $\backslash\text{Supset}$
 20901 $\backslash\text{nSupset}$
 20902 $\backslash\text{Cap}$

20903 \let\Cup\textCup
 20904 \let\pitchfork\textpitchfork
 20905 \let\lessdot\textlessdot
 20906 \let\gtrdot\textgtrdot
 20907 \let\lll\textlll
 20908 \let\ggg\textggg
 20909 \let\lesseqgtr\textlesseqgtr
 20910 \let\gtreqless\textgtreqless
 20911 \let\curlyeqprec\textcurlyeqprec
 20912 \let\ncurlyeqprec\textncurlyeqprec
 20913 \let\curlyeqsucc\textcurlyeqsucc
 20914 \let\ncurlyeqsucc\textncurlyeqsucc
 20915 \let\preccurlyeq\textpreccurlyeq
 20916 \let\nsuccurlyeq\textnsuccurlyeq
 20917 \let\subsetseq\textsubsetseq
 20918 \let\supseteq\textsupseteq
 20919 \let\subsetneq\textsubsetneq
 20920 \let\supsetneq\textsupsetneq
 20921 \let\lnsim\textlnsim
 20922 \let\gnsim\textgnsim
 20923 \let\precnsim\textprecnsim
 20924 \let\succnsim\textsuccnsim
 20925 \let\triangleleft\texttriangleleft
 20926 \let\triangleright\texttriangleright
 20927 \let\trianglelefteq\texttrianglelefteq
 20928 \let\trianglerighteq\texttrianglerighteq
 20929 \let\vdots\textvdots
 20930 \let\cdots\textcdots
 20931 \let\udots\textudots
 20932 \let\ddots\textddots
 20933 \let\barin\textbarin
 20934 \let\diameter\textdiameter
 20935 \let\backneg\textbackneg
 20936 \let\wasylounge\textwasylounge
 20937 \let\invbackneg\textinvbackneg
 20938 \let\clock\textclock
 20939 \let\ulcorner\textulcorner
 20940 \let\urcorner\texturcorner
 20941 \let\llcorner\textllcorner
 20942 \let\lrcorner\textlrcorner
 20943 \let\frown\textfrown
 20944 \let\smile\textsmile
 20945 \let\Keyboard\textKeyboard
 20946 \let\langle\textlangle
 20947 \let\rangle\textrangle
 20948 \let\APLinv\textAPLinv
 20949 \let\Tumbler\textTumbler
 20950 \let\notslash\textnotslash
 20951 \let\notbackslash\textnotbackslash
 20952 \let\boxbackslash\textboxbackslash

20953 \let\APLleftarrowbox\textAPLleftarrowbox
 20954 \let\APLrightarrowbox\textAPLrightarrowbox
 20955 \let\APLuparrowbox\textAPLuparrowbox
 20956 \let\APLdownarrowbox\textAPLdownarrowbox
 20957 \let\APLinput\textAPLinput
 20958 \let\Request\textRequest
 20959 \let\Beam\textBeam
 20960 \let\hexagon\texthexagon
 20961 \let\APLbox\textAPLbox
 20962 \let\ForwardToIndex\textForwardToIndex
 20963 \let\RewindToIndex\textRewindToIndex
 20964 \let\bbslash\textbbslash
 20965 \let\CircledA\textCircledA
 20966 \let\CleaningF\textCleaningF
 20967 \let\CleaningFF\textCleaningFF
 20968 \let\CleaningP\textCleaningP
 20969 \let\CleaningPP\textCleaningPP
 20970 \let\CuttingLine\textCuttingLine
 20971 \let\UParrow\textUParrow
 20972 \let\bigtriangleup\textbigtriangleup
 20973 \let\Forward\textForward
 20974 \let\triangleright\texttriangleright
 20975 \let\RHD\textRHD
 20976 \let\DOWNarrow\textDOWNarrow
 20977 \let\bigtriangledown\textbigtriangledown
 20978 \let\Rewind\textRewind
 20979 \let\triangleleft\texttriangleleft
 20980 \let\LHD\textLHD
 20981 \let\diamond\textdiamond
 20982 \let\lozenge\textlozenge
 20983 \let\LEFTCIRCLE\textLEFTCIRCLE
 20984 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20985 \let\openbullet\textopenbullet
 20986 \let\boxbar\textboxbar
 20987 \let\bigcircle\textbigcircle
 20988 \let\Cloud\textCloud
 20989 \let\FiveStar\textFiveStar
 20990 \let\FiveStarOpen\textFiveStarOpen
 20991 \let\Phone\textPhone
 20992 \let\boxempty\textboxempty
 20993 \let\Checkedbox\textCheckedbox
 20994 \let\Crossedbox\textCrossedbox
 20995 \let\Coffeecup\textCoffeecup
 20996 \let\HandCuffLeft\textHandCuffLeft
 20997 \let\HandCuffRight\textHandCuffRight
 20998 \let\HandLeft\textHandLeft
 20999 \let\HandRight\textHandRight
 21000 \let\Radioactivity\textRadioactivity
 21001 \let\Biohazard\textBiohazard
 21002 \let\Ankh\textAnkh

21003 \let\YinYang\textYinYang
 21004 \let\frownie\textfrownie
 21005 \let\smiley\textsmiley
 21006 \let\blacksmiley\textblacksmiley
 21007 \let\sun\textsun
 21008 \let\leftmoon\textleftmoon
 21009 \let\rightmoon\textrightmoon
 21010 \let\mercury\textmercury
 21011 \let\earth\textearth
 21012 \let\male\textmale
 21013 \let\jupiter\textjupiter
 21014 \let\saturn\textsaturn
 21015 \let\uranus\texturanus
 21016 \let\neptune\textneptune
 21017 \let\pluto\textpluto
 21018 \let\aries\textaries
 21019 \let\taurus\texttaurus
 21020 \let\gemini\textgemini
 21021 \let\cancer\textcancer
 21022 \let\leo\textleo
 21023 \let\virgo\textvirgo
 21024 \let\libra\textlibra
 21025 \let\scorpio\textscorpio
 21026 \let\sagittarius\textsagittarius
 21027 \let\capricornus\textcapricornus
 21028 \let\aquarius\textaquarius
 21029 \let\pisces\textpisces
 21030 \let\quarternote\textquarternote
 21031 \let\twonotes\texttwonotes
 21032 \let\sixteenthnote\textsixteenthnote
 21033 \let\flat\textflat
 21034 \let\natural\textnatural
 21035 \let\sharp\textsharp
 21036 \let\recycle\textrecycle
 21037 \let\Wheelchair\textWheelchair
 21038 \let\Flag\textFlag
 21039 \let\MineSign\textMineSign
 21040 \let\ds military\textds military
 21041 \let\ds medical\textds medical
 21042 \let\ds juridical\textds juridical
 21043 \let\ds chemical\textds chemical
 21044 \let\ds biological\textds biological
 21045 \let\ds commercial\textds commercial
 21046 \let\manstar\textmanstar
 21047 \let\danger\textdanger
 21048 \let\FemaleFemale\textFemaleFemale
 21049 \let\MaleMale\textMaleMale
 21050 \let\FemaleMale\textFemaleMale
 21051 \let\Hermaphrodite\textHermaphrodite
 21052 \let\Neutral\textNeutral

21053 \let\hexstar\texthexstar
 21054 \let\SunCloud\textSunCloud
 21055 \let\Rain\textRain
 21056 \let\noway\textnoway
 21057 \let\Mountain\textMountain
 21058 \let\Tent\textTent
 21059 \let\ScissorRight\textScissorRight
 21060 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21061 \let\ScissorHollowRight\textScissorHollowRight
 21062 \let\PhoneHandset\textPhoneHandset
 21063 \let\Tape\textTape
 21064 \let\Plane\textPlane
 21065 \let\Envelope\textEnvelope
 21066 \let\Peace\textPeace
 21067 \let\WritingHand\textWritingHand
 21068 \let\PencilRightDown\textPencilRightDown
 21069 \let\PencilRight\textPencilRight
 21070 \let\PencilRightUp\textPencilRightUp
 21071 \let\NibRight\textNibRight
 21072 \let\NibSolidRight\textNibSolidRight
 21073 \let\Checkmark\textCheckmark
 21074 \let\CheckmarkBold\textCheckmarkBold
 21075 \let\XSolid\textXSolid
 21076 \let\XSolidBold\textXSolidBold
 21077 \let\XSolidBrush\textXSolidBrush
 21078 \let\PlusOutline\textPlusOutline
 21079 \let\Plus\textPlus
 21080 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21081 \let\PlusCenterOpen\textPlusCenterOpen
 21082 \let\Cross\textCross
 21083 \let\CrossOpenShadow\textCrossOpenShadow
 21084 \let\CrossOutline\textCrossOutline
 21085 \let\CrossMaltese\textCrossMaltese
 21086 \let\DavidStar\textDavidStar
 21087 \let\FourAsterisk\textFourAsterisk
 21088 \let\JackStar\textJackStar
 21089 \let\JackStarBold\textJackStarBold
 21090 \let\ClowerTips\textClowerTips
 21091 \let\FourStar\textFourStar
 21092 \let\FourStarOpen\textFourStarOpen
 21093 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21094 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21095 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21096 \let\FiveStarOutline\textFiveStarOutline
 21097 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21098 \let\FiveStarConvex\textFiveStarConvex
 21099 \let\FiveStarShadow\textFiveStarShadow
 21100 \let\AsteriskBold\textAsteriskBold
 21101 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21102 \let\EightStarTaper\textEightStarTaper

21103 \let\EightStarConvex\textEightStarConvex
 21104 \let\SixStar\textSixStar
 21105 \let\EightStar\textEightStar
 21106 \let\EightStarBold\textEightStarBold
 21107 \let\TwelveStar\textTwelveStar
 21108 \let\SixteenStarLight\textSixteenStarLight
 21109 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21110 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21111 \let\Asterisk\textAsterisk
 21112 \let\SixFlowerAlternate\textSixFlowerAlternate
 21113 \let\FiveFlowerPetal\textFiveFlowerPetal
 21114 \let\FiveFlowerOpen\textFiveFlowerOpen
 21115 \let\EightFlowerPetal\textEightFlowerPetal
 21116 \let\SunshineOpenCircled\textSunshineOpenCircled
 21117 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21118 \let\SnowflakeChevron\textSnowflakeChevron
 21119 \let\Snowflake\textSnowflake
 21120 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21121 \let\Sparkle\textSparkle
 21122 \let\SparkleBold\textSparkleBold
 21123 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21124 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21125 \let\EightAsterisk\textEightAsterisk
 21126 \let\CircleShadow\textCircleShadow
 21127 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21128 \let\SquareTopRight\textSquareTopRight
 21129 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21130 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21131 \let\DiamondSolid\textDiamondSolid
 21132 \let\RectangleThin\textRectangleThin
 21133 \let\Rectangle\textRectangle
 21134 \let\RectangleBold\textRectangleBold
 21135 \let\perp\textperp
 21136 \let\notperp\textnotperp
 21137 \let\veedot\textveedot
 21138 \let\wedgedot\textwedgedot
 21139 \let\leftspoon\textleftspoon
 21140 \let\lbrackdbl\textlbrackdbl
 21141 \let\rbrackdbl\textrbrackdbl
 21142 \let\circlearrowleft\textcirclearrowleft
 21143 \let\circlearrowright\textcirclearrowright
 21144 \let\longleftarrow\textlongleftarrow
 21145 \let\longrightarrow\textlongrightarrow
 21146 \let\longlefttrightarrow\textlonglefttrightarrow
 21147 \let\Longleftarrow\textLongleftarrow
 21148 \let\Longrightarrow\textLongrightarrow
 21149 \let\Longlefttrightarrow\textLonglefttrightarrow
 21150 \let\longmapsto\textlongmapsto
 21151 \let\Longmapsfrom\textLongmapsfrom
 21152 \let\Longmapsto\textLongmapsto

21153 \let\nwsearrow\textnwsearrow
 21154 \let\neswarrow\textneswarrow
 21155 \let\lhooknarrow\textlhooknarrow
 21156 \let\rhooknarrow\textrhoonarrow
 21157 \let\lhooksearrow\textlhooksearrow
 21158 \let\rhooksearrow\textrhoonarrow
 21159 \let\leadsto\textleadsto
 21160 \let\rcurvearrowne\textrcurvearrowne
 21161 \let\lcurvearrowse\textlcurvearrowse
 21162 \let\lcurvearrowsw\textlcurvearrowsw
 21163 \let\rcurvearrowse\textrcurvearrowse
 21164 \let\lcurvearrowdown\textlcurvearrowdown
 21165 \let\rcurvearrowdown\textrcurvearrowdown
 21166 \let\rcurvearrowleft\textrcurvearrowleft
 21167 \let\rcurvearrowright\textrcurvearrowright
 21168 \let\leftrightharpoon\textleftrightharpoon
 21169 \let\rightrightarpoon\textrightleftarpoon
 21170 \let\updownharpoonleftright\textupdownharpoonleftright
 21171 \let\updownharpoonleftright\textupdownharpoonleftright
 21172 \let\leftleftharpoons\textleftleftharpoons
 21173 \let\upupharpoons\textupupharpoons
 21174 \let\rightrightarpoons\textrighttrightarpoons
 21175 \let\downdownharpoons\textdowndownharpoons
 21176 \let\leftbarharpoon\textleftbarharpoon
 21177 \let\barleftbarharpoon\textbarleftbarharpoon
 21178 \let\rightbarharpoon\textrightbarharpoon
 21179 \let\barrightharpoon\textbarrightharpoon
 21180 \let\updownharpoons\textupdownharpoons
 21181 \let\downupharpoons\textdownupharpoons
 21182 \let\moo\textmoo
 21183 \let\llparenthesis\textllparenthesis
 21184 \let\rrparenthesis\textrrparenthesis
 21185 \let\invdiameter\textinvdiameter
 21186 \let\obar\textobar
 21187 \let\obslash\textobslash
 21188 \let\obot\textobot
 21189 \let\NoChemicalCleaning\textNoChemicalCleaning
 21190 \let\olessthan\textolessthan
 21191 \let\ogreaterthan\textogreaterthan
 21192 \let\boxslash\textboxslash
 21193 \let\boxbslash\textboxbslash
 21194 \let\boxast\textboxast
 21195 \let\boxcircle\textboxcircle
 21196 \let\boxbox\textboxbox
 21197 \let\Valve\textValve
 21198 \let\multimapboth\textmultimapboth
 21199 \let\shuffle\textshuffle
 21200 \let\uplus\textuplus
 21201 \let\bigdoublewedge\textbigdoublewedge
 21202 \let\bigdoublevee\textbigdoublevee

21203 \let\Join\textJoin
 21204 \let\fatsemi\textfatsemi
 21205 \let\circplus\textcircplus
 21206 \let\minusdot\textminusdot
 21207 \let\dottimes\textdottimes
 21208 \let\dtimes\textdtimes
 21209 \let\odiv\textodiv
 21210 \let\invneg\textinvneg
 21211 \let\squdoublecap\textsqudoublecap
 21212 \let\capdot\textcapdot
 21213 \let\squdoublecup\textsqudoublecup
 21214 \let\doublewedge\textdoublewedge
 21215 \let\doublevee\textdoublevee
 21216 \let\doublebarwedge\textdoublebarwedge
 21217 \let\veedoublebar\textveedoublebar
 21218 \let\eqdot\texteqdot
 21219 \let\neqdot\textneqdot
 21220 \let\coloncolonequals\textcoloncolonequals
 21221 \let\leqslant\textleqslant
 21222 \let\neqslant\textneqslant
 21223 \let\geqslant\textgeqslant
 21224 \let\ngeqslant\textngeqslant
 21225 \let\lessapprox\textlessapprox
 21226 \let\nlessapprox\textnlessapprox
 21227 \let\gtrapprox\textgtrapprox
 21228 \let\ngtrapprox\textngtrapprox
 21229 \let\lneq\textlneq
 21230 \let\gneq\textgneq
 21231 \let\lnapprox\textlnapprox
 21232 \let\gnapprox\textgnapprox
 21233 \let\lesseqgtr\textlesseqgtr
 21234 \let\gtreqless\textgtreqless
 21235 \let\eqslantless\texteqslantless
 21236 \let\eqslantgtr\texteqslantgtr
 21237 \let\leftslice\textleftslice
 21238 \let\rightslice\textright slice
 21239 \let\preceq\textpreceq
 21240 \let\preceqq\textpreceqq
 21241 \let\succeq\textsucceq
 21242 \let\succeqq\textsucceqq
 21243 \let\precneq\textprecneq
 21244 \let\succneq\textsuccneq
 21245 \let\preceqq\textpreceqq
 21246 \let\preceqq\textpreceqq
 21247 \let\succeqq\textsucceqq
 21248 \let\succeqq\textsucceqq
 21249 \let\precneqq\textprecneqq
 21250 \let\succneqq\textsuccneqq
 21251 \let\precapprox\textprecapprox
 21252 \let\precapprox\textprecapprox

21253 \let\succapprox\textsuccapprox
 21254 \let\nsuccapprox\textnsuccapprox
 21255 \let\precnapprox\textprecnapprox
 21256 \let\succnapprox\textsuccnapprox
 21257 \let\subseteqq\textsubseteqq
 21258 \let\nsubseteqq\textnsubseteqq
 21259 \let\supseteqq\textsupseteqq
 21260 \let\nsupseteqq\textnsupseteqq
 21261 \let\dashV\textdashV
 21262 \let\ndashV\textndashV
 21263 \let\Dashv\textDashv
 21264 \let\ndashv\textndashv
 21265 \let\DashV\textDashV
 21266 \let\ndashV\textndashV
 21267 \let\downmodels\textdownmodels
 21268 \let\ndownmodels\textndownmodels
 21269 \let\upmodels\textupmodels
 21270 \let\nupmodels\textnupmodels
 21271 \let\upspoon\textupspoon
 21272 \let\interleave\textinterleave
 21273 \let\slash\textslash
 21274 \let\pentagon\textpentagon
 21275 \let\varhexagon\textvarhexagon
 21276 \let\jinferior\textjinferior
 21277 \let\slashdiv\textslashdiv
 21278 \let\fivedots\textfivedots
 21279 \let\oo\textoo
 21280 \let\GaPa\textGaPa
 21281 \let\HaPa\textHaPa
 21282 \let\ViPa\textViPa
 21283 \let\AcPa\textAcPa
 21284 \let\SePa\textSePa
 21285 \let\ZwPa\textZwPa
 21286 \let\fullnote\textfullnote
 21287 \let\halfnote\texthalfnote
 21288 \let\Vier\textVier
 21289 \let\Acht\textAcht
 21290 \let\Sech\textSech
 21291 \let\Zwdr\textZwdr
 21292 \let\Mundus\textMundus
 21293 \let\Moon\textMoon
 21294 \let\ManFace\textManFace
 21295 \let\WomanFace\textWomanFace
 21296 \let\Fax\textFax
 21297 \let\Fire\textFire
 21298 \let\Bicycle\textBicycle
 21299 \let\Gentsroom\textGentsroom
 21300 \let\Ladiesroom\textLadiesroom
 21301 \let\ccnc\textccnc
 21302 \let\ccsa\textccsa

21303 \let\Info\textInfo
 21304 \let\CESign\textCESign
 21305 \let\neg\textneg
 21306 \let\times\texttimes
 21307 \let\div\textdiv
 21308 \let\pm\textpm
 21309 \let\cdot\textcdot
 21310 }% \psdmapshortnames
 21311 \newcommand*{\psdaliasnames}{%
 21312 \let\epsdice\HyPsd@DieFace
 21313 \let\fcdice\HyPsd@DieFace
 21314 \let\MoonPha\HyPsd@MoonPha
 21315 \let\mathdollar\textdollar
 21316 \let\EyesDollar\textdollar
 21317 \let\binampersand\textampersand
 21318 \let\with\textampersand
 21319 \let\mathunderscore\textunderscore
 21320 \let\textvertline\textbar
 21321 \let\mathsterling\textsterling
 21322 \let\pounds\textsterling
 21323 \let\brokenvert\textbrokenbar
 21324 \let\mathsection\textsection
 21325 \let\S\textsection
 21326 \let\mathparagraph\textparagraph
 21327 \let\MultiplicationDot\textperiodcentered
 21328 \let\Squaredot\textperiodcentered
 21329 \let\vartimes\textmultiply
 21330 \let\MVMultiplication\textmultiply
 21331 \let\eth\dh
 21332 \let\crossd\textcrd
 21333 \let\textbard\textcrd
 21334 \let\bard\textcrd
 21335 \let\textcrh\texthbar
 21336 \let\crossh\texthbar
 21337 \let\planck\texthbar
 21338 \let\eng\ng
 21339 \let\engma\ng
 21340 \let\crossb\textcrb
 21341 \let\textbarb\textcrb
 21342 \let\barb\textcrb
 21343 \let\Florin\textflorin
 21344 \let\hv\texthvl
 21345 \let\hausak\textthk
 21346 \let\crossnilambda\textcrlambda
 21347 \let\barlambda\textcrlambda
 21348 \let\lambdabar\textcrlambda
 21349 \let\lambdaslash\textcrlambda
 21350 \let\textnrleg\textPUnrleg
 21351 \let\textpipevar\textpipe
 21352 \let\textdoublepipevar\textdoublepipe

21353 \let\textdoublebarpipevar\textdoublebarpipe
 21354 \let\textcrg\textgslash
 21355 \let\textdblig\textPUdblig
 21356 \let\textqplig\textPUqplig
 21357 \let\textcentoldstyle\textslashc
 21358 \let\textbarc\textslashc
 21359 \let\inva\textturna
 21360 \let\vara\textscripta
 21361 \let\invscripta\textturnscripta
 21362 \let\rotvara\textturnscripta
 21363 \let\hookb\texthtb
 21364 \let\hausab\texthtb
 21365 \let\varopeno\textopeno
 21366 \let\curlyc\textctc
 21367 \let\taild\textrtaild
 21368 \let\hookd\texthtd
 21369 \let\hausad\texthtd
 21370 \let\er\textrhooschwa
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 21376 \let\varg\textscriptg
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 21405 \let\flapr\textfishhookr
 21406 \let\flap\textfishhookr
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 21552 \let\MoveUp\textUParrow

21553 \let\APLup\textbigtriangleup
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52 End of file hyccheck.tex

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21658 \begin{document}
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